CORRESPONDENCE

FOR THE

INTRODUCTION

OF

GENUINE COW-POX

INTO

HINDOOSTAN.

BY JAMES ANDERSON,

PHYSICIAN GENERAL AT FORT SAINT GEORGE.

MADRAS:

COLLECTED AND RE-PRINTED BY WILLIAM URQUHART.

1803.

CORRESPONDENCE.

Doctor H. SCOTT of Bombay, to Doctor ANDERSON, P. G. Madras.

I SEND you some pieces of cloth that have been well impregnated with the matter of Cow Pox; by cutting it into little bits you will be able to inoculate a number of children with it, I must refer you to the Bombay Courier of this day for some account of what has been done here regarding that disease.

I shall, by next post, send you a few threads that have been wet in Vaccine Matter, and shall occasionally transmit you some until I find you have produced the disease at Madras. When you have once got the recent disease you will find it as easily propogated by inoculation as the Small Pox. The natives here are all anxious to have their children inoculated and we have already many more solicitations in this way than it is possible to comply with. I am extremely fearful that the native practitioners will allow the vaccine matter to be mixed with variolous, or that, as has been often done in Europe, they will use it at too advanced periods of the disease.

This may bring discredit on this excellent practice at its very beginning. I shall therefore trust it to them with extreme caution and apprehension. To them however we must entrust it or the advantages of it can never be sufficiently diffused in this populous country.

I think of printing and dispersing a few plain directions on the subject in Malabaric, Arabic and the language of Guzurat. The last mentioned is understood in almost every part on this side of India.

The vaccine disease as it has appeared here is infinitely to be preferred to the mildest kind of inoculated Small Pox. The fever has been far less troublesome, nor have the ulceration on the inoculated parts been attended with much inconveniency.

One of my own children is now in the 12th day of the disease and two more of them in the 4th. The youngest of these two is only a few weeks old.

I observe that you recommend at Madras inoculating for the Small Pox in the cold weather. This is certainly not consistent with our experience at this place. Every case for many years past of confluent Small Pox that has occurred here from inoculation has been in the cold weather. The natural disease is also more deadly at that time. In one small street in Bombay, there were sixty children who caught the natural Small Pox last year during the cold weather; of these not less than twenty died.—As the season got hotter, the disease became milder, and as usual disappeared in the very hot months.

Our climate therefore muſt differ in ſomething very material from your's. During our cold weather the wind comes chiefly from the land, and parches the ſkin of children in a ſurpriſing manner. This I imagine makes the variolous matter ſtick in the ſkin and produce many puſtules. We have not been very ſucceſsful with inoculation at this place, I imagine that on a medium for many years, one child in forty at leaſt has died of the Small Pox; and a greater number have ſuffered very ſeverely from the diſeaſe. How different is this from the Cow Pox!

We have a contagious diſeaſe here which affects our Buffaloes and Oxen, it is known both by the Moors and Portugueſe by the name of Small Pox. There is no eruption on the ſkin of the animal, but there is in the mouth, from which great quantities of ſaliva are conſtantly flowing. This diſeaſe ſome times kills great numbers of theſe animals at the concluſion of the rainy ſeaſon, when it is epidemic and reduces many of our farmers to ruin. I ſhould like much to know if you have ſuch a complaint among your cattle, and whether you know of any remedy for it. Here we know of no remedy. Such of the Oxen as ſurvive the diſeaſe by the effort of nature, languiſh a long time afterwards and hardly ever recover their ſtrength.

I mean to try the effect of inoculating thoſe animals with the Cow Pox as a preventive of this dreadful diſeaſe. I ſhall do it not entirely without hopes of ſucceſs, for I obſerve that in England they now inoculate Dogs with the matter of Cow Pox which guard them againſt a pulmonic diſeaſe, to which they are otherwiſe very ſubject. In ſeveral parts of Europe, they have of late too vaccinated Sheep to preſerve them from that diſeaſe which is called the rot.

We know at preſent but little of the limits to which this ſubject may extend. They are only to be diſcovered by experience.

Bombay, 3d *July* 1802. H. SCOTT.

Doctor ANDERSON'S Answer.

I HAVE the pleaſure to acknowledge the receipt of your letter of the 3d inſt. encloſing matter of Cow Pox, which has been carefully divided and diſtributed to ſix Gentlemen this morning, who have proper Patients under their immediate care, and will I truſt ſucceed in the introduction and diffuſion of a diſeaſe ſo highly warranted of being not only milder, but likewiſe preventive of the Small Pox.

We have repeatedly tried matter ſent direct from England which has hitherto proved effete, and diſappointed the hopes of European Parents to whom the Cow Pox becomes a very deſirable object, as inoculation of Small Pox has not always been attended with the happieſt conſequences amongſt their Children.

With the Natives however, the diſeaſe has been ſo favorable under the direction of European Surgeons, and even Native Doctors and Bramins, as to leave nothing more to be wiſhed for, excepting to render the practice general; and now as we have no doubt that your Matter will ſucceed, every one may chuſe to inoculate as they like beſt, either with Cow Pox or Small Pox; for we have none of thoſe apprehenſions of ill conſequences from a mixture of the two, but believe the inoculation of either or of both, will generally produce a milder diſeaſe than when gradually communicated in any other way, amongſt the natives who are leſs ſubject to inflamation than Europeans.

It ſeems to be eſtabliſhed that well defined puſtules of Cow Pox, appear only on the place that has been inoculated, and that when puſtules appear on any other part they are of variolous nature, but as no practitioner can tell whether the patient whom he is about to inocu-

late with Cow Pox, is not already infected with the Small Pox, all that can be expected of the inoculator is, that he shall use matter taken from a person who has no other disease besides Cow Pox, which there can be no doubt the Surgeons will carefully observe, as well on account of character, as a due regard to the public welfare.

The Climates of the Malabar and Coromandel Coasts are no doubt very different, as the Northern declination of the Sun is attended with rain on the one, and severe Drought on the other, but the Natives every where, Plants as well as Animals, and Men are subject to less Disease in Seasons that are dry and hot, than in such as are wet and cold; provided they are not deprived of the moisture necessary to their sustenance, and in this way you will understand why we here have recommended that inoculation should not commence until the rainy season is past, and our coldest season is seventy degrees of Farenheit's Thermometer.

Some Bramins have lately inoculated numbers of People on the banks of the Kistna in the hot season, but there the Thermometer falls as low as 55° in the month of January, a degree of cold more than they can bear with safety---and here we have inoculated with success at all times of the year avoiding only the monsoon of October and November, and believing the hot land wind season of May and June less favorable than the dry months of December, January, February and March. The inoculation has hitherto been conducted with the loss of one Patient in three or four hundred at most.

Enclosed I send you Papers from Ceylon, on the diseases of Cattle, which prevails at times of great drought over all this country, under the name of Small Pox and may be allied to the murrain of Europe: and you will see by the Madras Gazette of March 21st 1801, the advantage gained by inoculating for this disease in Yorkshire.

22d July, 1802. J. ANDERSON.

To the EDITOR of the BOMBAY COURIER.

For the satisfaction of the public, and the information of professional men in India, we beg of you to publish the following account of the introduction of the Cow Pox into this place. We have it now in our power to communicate the benefit of this important discovery to every part of India, perhaps to China and the whole eastern world. We shall spare no pains in accomplishing a purpose so desirable, by which one of the greatest evils that has afflicted humanity may be diminished in a great degree, or even extinguished altogether.

In the course of the last twelve months, we have repeatedly received by sea from England the vaccine matter, with which many children have been inoculated to no purpose. We were not more successful with matter which was sent to us directly by land from Constantinople. Fortunately Dr. Short, a Surgeon on this Establishment, residing at Bagdad, produced the disease at that place. He immediately forwarded the matter to Bussora, where Mr. Milne, the Surgeon of that Residency, also succeeded in infecting a patient with it, Mr. Milne soon afterwards inoculated a number of other children, and he sent the vaccine matter to us by several ships. Even with this matter we were for a time unsuccessful, and after thirty or forty trials by various methods and by different Surgeons. A fortunate inoculation at length produced the vaccine disease in Anna Dusthill, who is perhaps the first human being who underwent it in India. This child, the daughter of a servant of Captain Hardin, is about three years of age. She is very healthy, and certainly never had the small pox. It is necessary to men-

tion these circumstances, as from her alone the whole of the matter that is about to be sent all over India was at first derived.

We have received no history of the patients from whom it was taken at Bagdad and Bussora, but we trust with confidence, from our knowledge of the medical gentlemen at those places, that no pains have been spared to make it pass thro' unexceptionable bodies.

From Anna Dusthill, on the 8th day of her disease and on the 22d of last month, seven children were inoculated: five of those, who certainly never had the Small Pox, took the infection, and have already gone thro' nearly the whole course of the vaccine disease. The other two were not infected, but there is some probability that one of them has had the Small Pox. From the five children that were infected about thirty more have been inoculated, and a great number of them no doubt will take the disease. From these last we shall send the vaccine matter to the other Presidencies, to Surat, Poona, &c. &c. and care shall be taken that none shall be employed but from an unexceptionable source.

The vaccine disease in Anna Dusthill passed, as we have said, through its ordinary course as described by writers on the subject. The pustule began to show itself about the third day. During the course of the fifth and sixth she had slight symptoms of fever and some uneasiness in the arm-pit of the inoculated side. The pustule on the eighth day was of the proper size for that period. It was flat rather concave, and it consisted of many cells, which on being pricked gave out a transparent fluid. By the tenth day the inflamed areola round the pustule was extensive and very distinct in spite of the blackness of her skin. She had only a single pustule on the inoculated part, nor during the whole time did she suffer any material inconveniency from the complaint.

All the five children who were inoculated from her, had a similar train of symptoms. On two of them, whose parents were European the inflamed areola, from the whiteness of their skins, was much more distinct than it had been on Anna Dusthill.

We have thus detailed the progress of the symptoms, and we have no doubt but that this is the genuine Cow Pox. Some Surgeons here who have seen the disease in Europe are of the same opinion. We hope therefore, that this will tend to quiet the apprehensions of parents, which in some instances we find to be very great, and that our experience at this place, so far as it has gone will give confidence to practitioners. Almost all the medical men at this presidency have witnessed this disease, many of them are inoculating for it, nor do we understand that any difference of opinion has arisen concerning its nature.

One test indeed we still want of its genuine nature, and that is, its power of preventing the variolous infection, to this test it shall shortly be put. As this Island does not contain less than 150 thousand people, sufficient supplies of children must arise to keep up the disease, even without any dependance on Salsette or the neighbouring Continent.

The Hindoos and Parsees, both here and at Surat shew the utmost desire of having their Children inoculated with the vaccine disease. We shall instruct the Native Practitioners of Physic regarding it, but on this part of the subject we are not without apprehensions. Whoever is sufficiently acquainted with what has been done in Europe with regard to the Cow Pox is aware that some foreign poison, such as that of the small Pox, is apt to be mixed with it, when a compound disease arises; or some other poisonous matter may be from various causes introduced, instead of the vaccine virus, when a disease altogether different is produced. The history of the Count de Moffet as lately detailed by Dr. Carro affords a most

instructive lesson on this subject. The greatest care therefore should be employed to warn the Native Practitioners, that the vaccine matter may be degraded by many causes, and that their utmost attention is necessary to prevent it.

We can affirm from our own knowledge, that this Government have anxiously assisted our wishes for procuring the vaccine disease by the way of Bussora. They represented to Lord Elgin the importance of it to this great society of mankind, and they called for the aid of the Residents of Bussora and Bagdad. Doctor de Carro of Vienna, who has distinguished himself so honourably in this career, transmitted in the first instance the Vaccine matter to Lord Elgin, who several times before had shewn us his attention to the subject. By his Lordship's orders it was sent to our Resident at Bagdad and again to the Resident at Bussora. To both those Gentlemen the public are under great obligation for the interest they took in the subject. Finally it fell into the hands of Dr. Short and Mr. Milne as we have already said, nor could it have been more fortunately placed.

We have been more particular than was necessary for the medical profession, who must be supposed to be in possession of every fact that has occurred on the subject in Europe, but as we shall disperse the vaccine disease very widely, as it will effect, and as we hope it will promote the happiness of every family, we wish to satisfy the public at large concerning the sources from which we have derived it, and the foundation of our belief that it is of a genuine kind.

WILL. MOIR,
H. SCOTT.

Bombay, July 2d, 1802.

Doctor ANDERSON to the EDITOR of the GOVERNMENT GAZETTE.

Having published in the Madras Gazette of the 23d Instant, a Letter from Doctor Scott of Bombay transmitting Cow Pox matter, I herewith send you the copy of a Letter from the Medical Board at that place on the same subject, received yesterday, for insertion in your paper, that the Public may have the most early information of this being carefully divided into eight portions, and each applied only to a single Patient, as no certain effect yet appears to have followed the former inoculation, which may be owing to its being divided into portions too small.

As your Paper no doubt reaches Bombay, it may likewise be of use to state the practicability of a Government Despatch which would reach this place in eleven days, whereas the ordinary tappal is eighteen days on the road, and above all, that the Medical Board should send matter to Surgeon Major Kennedy at Hydrabad, and Mr. Head Surgeon Price at Canara, for although this infection has been preserved fifty days in England, the greater heat of this climate may dissipate it sooner.

JAMES ANDERSON,
Fort St. George, 27th July, 1802.

To the SECRETARY of the MEDICAL BOARD,

MADRAS.

I have much pleasure in obeying the order of the Medical Board at this Presidency, to forward to you the accompanying Cow Pox matter, it is inclosed in a small silver Canula which is covered with wax, the whole of the Cloth and Thread contained therein was moistened with the matter, so that it is hoped, any particle of either will give infection—The matter was taken this day from a healthy Child of European

Parents, and on the ninth day after its inoculation, a period we have hitherto found the fittest, in the hope that you will be successful in introducing the disease at your Presidency. I am &c.

Bombay, July 7, 1802. W. SANDWITH, SECRETARY.

Doctor H. SCOTT of Bombay, to Doctor ANDERSON, P. G. Madras.

I send you some threads well impregnated with vaccine matter, and I do not doubt but you will succeed with them---I hope you have already done so, with my first supply.

The vaccine disease goes on well here, we have already communicated it to above 200 Children, who have had a mild disease; we have not seen it produce a single pustule, but on the inoculated part; nor any alarming symptom of any kind.

H. SCOTT.

Bombay, July 24, 1802.

Doctor ANDERSON's Answer.

By the communication of Letters from Columbo, I learn that Cow-Pox matter a month from Bombay, has been tried there without effect, and am sorry to add, that your last dispatch to this place, was applied five days ago, without producing any of the characteristic marks of infection, for which I am the more concerned as three days ago, a Letter from Mr. Kennedy, Staff Surgeon at Hydrabad, acquainted me of the application of matter sent by you to Mr. Ure, two days before the date of his Letter, so that by this time, I should have been farther informed in case of success, the symptoms being allowed to be distinguishable in five days.

As you will have advices from Hydrabad before what I now write can reach Bombay, I think in case of failure, your attention will be directed to Poona, Aurungabad, or some station near at hand, where should the matter likewise prove abortive, I will observe that persons lately from England, assure me notwithstanding what we have read in many publications, that matter brought only from the next village, has been frequently found to fail, and the practice consequently adopted, is, to bring the Agent and Patient together, so as to inoculate with matter taken immediately from the Pustules.

In this way there cannot exist a doubt of the infection being gradually extended, and I should hope that by virtue of love or money, Children recently inoculated may be induced to travel or be conveyed to such places as they may easily reach within the space of nine days, the period which has been found most proper for communicating the disease, and thus others may be inoculated from them, until in this manner the whole of Hindostan has reaped the benefit of this more than healing art, as it is the art of preventing a loathsome disease, which has hitherto proved the death of a very great proportion of all the Children that have come into the world.

Were it once established at Hydrabad, we should consider it almost as much in our possession as if already in Madras, but no doubt every ship that sails from your port, will carry some recently inoculated with the vaccine disease on board, and as there is frequently in such situations, a few persons who have never had the small-pox, it will thereby be practicable to continue the disease in succession, so as to carry it to distant places, such as Columbo and Madras.

JAMES ANDERSON.

Fort St. George, August 17, 1802.

Doctor ANDERSON *to the* EDITOR *of the* GOVERNMENT GAZETTE.

Having juſt received advice from Hydrabad of the Vaccine Diſeaſe taking effect at that place, you will pleaſe to inſert this, together with Mr. Ure's Letter in your next Paper; that the Public may be prepared to adopt aud receive ſo great a bleſſing. As there are likewiſe accounts of its ſucceſs at Columbo and Jaffnapatam, I rely on being enabled by ſuch recent matter, to announce our ſucceſs likewiſe here to Government, through the Channel of the Medical Board and Commander in Chief, and by every poſſible means endeavour the abolition and expulſion of Small Pox from this country.

You may likewiſe inſert Mr. Andrew's Letter,* to encourage the uſe and perſeverance in means of Relief in the moſt extreme caſes of wounds from the Colubor Naga.

J. ANDERSON,

Auguſt 31, 1802.

P. S.—Miſs Caroline and Miſs Emma Bowneſs have been inoculated on the 22d inſt. by Mr. Wiſe, with vaccine matter brought in ſixteen days from Bombay by Sea, by Captain Seton of the Myſore. Their two Children of Major Bowneſs, have had ſo much appearance of the diſeaſe as to induce Mr. Wiſe, to try matter taken from them on ſix other Children, the effects of which will be known in a few days.

To Doctor JAMES ANDERSON, *P. G. Madras.*

I have the pleaſing ſatisfaction to inform you that we have at laſt ſucceeded in getting the Cow Pox at Hydrabad, and I now ſend you by expreſs ſome threads well dipped in the vaccine matter, taken from the arm of a healthy child who had four diſtinct puſtules near the place where the matter was inſerted. This child was inoculated on the 18th of this Month with vaccine matter, which was diſpatched from Bombay to me by Mr. Scott on the 11th inſt. In about eight days hence I ſhall ſend you another ſupply of the Vaccine Matter. I have alſo by this expreſs ſent ſome of it to Dr. Harris at Maſulipatam.

GEORGE URE.

Hydrabad
Aug. 24, 1802.

Doctor ANDERSON *to the* EDITOR *of the* GOVERNMENT GAZETTE.

RELYING with confidence on the arrival of efficient Cow-pox matter, by ſome of the ways already mentioned in your paper, I muſt beg leave to trouble you farther, by the inſertion of a letter from Mr. Kier at Bombay, to Mr. Taſwell, accompanying vaccine matter that was applied here immediately on its arrival in 14 days by ſea, which will ſerve to ſhew, that repeated failure was there too in ſome degree experienced.

By Mr. Kier's letter, it appears likewiſe that he is ſo much aware of vaccine matter ſoon becoming effette on Cotton, he means to ſend it on Ivory Lancets; † but that no

* Vide Appendix.

† Dr. Remmett and ſeveral Practitioners in England, ſay, that "The inſertion of a piece of Thread impregnated with matter in the Arm, is a very uncertain method of inoculating," but Dr. Pearſon ſays, "When matter is to be kept for a long time, I preſerve it on Thread which I encloſe in a bottle filled with Hydrogen gas or Nitrogen gas, quite free from moiſture," but directs it, "to be taken from the arm of a Patient and immediately applied in its fluid ſtate, and that we muſt not wait for Suppuration, and indeed, if that comes on, the matter cannot be depended upon" He farther ſays, "The matter is in an efficacious ſtate from the 8th to the 11th day generally."

doubt might remain, of what we have received being useless; I have seen threads inserted into the Patient's arm with a needle in the manner of a Seton, and the nipples of a Milch-Cow which I caused to be inoculated with matter, remained without any apparent infection.

The Public are no doubt sensible, that innoculation is the only mode of communicating this disease, which removes the great difficulty that has hitherto lain in the way of small-pox, inoculation, from the apprehension of the infection spreading and extending to those who have not had the small-pox, for on all hands it is maintained, that the vaccine diseale is not communicable to persons living in the same house, or even sleeping in the same bed, without inoculation.

Having received and dispensed vaccine matter from Trincomallee as well as Hydrabad, since the above was written, you will give the Letter from Mr. Hall together with that from Mr. Kennedy a place in your Paper, as they not only shew the success of the Medical Board and Gentlemen of Bombay in extending the disease, but also serve to illustrate the mildness of the symptoms, under which it appears, in these adjacent places.

JAMES ANDERSON.
PHYSICIAN GENERAL.
Fort St. George, Sep. 8, 1802.

To GEORGE TASWELL, Esq. Madras.

Altho' the Vaccine virus has been sent to Fort St. George, we have not yet heard of its having reached that place in a state capable of producing the disease. We experienced great difficulty here, and failed in many attempts. I am now therefore induced to trouble you with a Phial containing matter. The rainy season is probably unfavourable to our sending the matter in an active state to any distance, which may have prevented Dr. Anderson from succeeding with the matter sent to him. With the present supply however I hope there is little doubt of his success as you have a prospect of a speedy passage. One of the Quills contains virus on thread, the other on a shred of muslin rag, the thread was carefully moistened this morning, and the muslin cloth covered a pustule (after opening the cell in many places) during the night. The matter is from different subjects of healthy parents, and taken on the sixth day from inoculation. Our success with the Cow-pox has equalled our most sanguine hopes. We have given the disease to many hundreds, and in every circumstance it has run its course in the most satisfactory manner and without any unfavorable symptom. I intended to have sent a few Ivory Lancets loaded with Matter, but the native employed to make them has disappointed me. I hope soon to hear that the blessings of this discovery are extended to your Presidency. By the next post I intend sending Matter to Dr. Anderson.

GEORGE KIER.
Bombay, August 15th, 1802.

To JAMES ANDERSON, Esq. M. D. &c. &c.

I have the pleasure of sending you by desire of Mr. Scott, two silver tubes containing Vaccine Matter, the threads in the two are from different subjects carefully taken this morning, the sixth and seventh day from inoculation. I hope this supply will reach you in a state capable of producing the disease.

GEORGE KIER.
Bombay, August 18th, 1802.

Mr. GILBERT HALL, Surgeon at Trincomallee, to Doctor JAMES ANDERSON, P. G. Madras.

Obferving by the laft Government Gazette of the 19th Inftant which arrived here this morning, that you have not yet been fuccefsful in producing that fo much defired, becaufe fafe and mild difeafe, the Cow pox at your place.—I have therefore taken the liberty of tranfmitting you herewith enclofed in a quill; feveral Cotton threads fully impregnated with Vaccine matter, which was this morning, being the ninth day of inoculation, at which period it is fuppofed to be in the greateft ftate of activity, taken from the arm of a very healthy Child about five years of age.—We are indebted to the great care, zeal and attention of the Medical Board at Bombay for the vaccine matter which produced this difeafe here about ten days ago.—It was tranfmitted upon Cotton threads carefully feal d up in a filver Canula, with which feven or eight fubjects were inoculated by Mr. Rogers the Garrifon Surgeon of this place, on all of whom it feemed upon obfervation, fome days afterward to have totally failed.—On the ninth day of inoculation however, in the abfence of Mr. Rogers on fpecial bufinefs at Jaffnapatam, I had the good fortune and happinefs to difcover the difeafe of the Cow-pox to be fully and diftinctly marked upon one of thefe fubjects, a boy about twelve or thirteen years of age, from whom I had on the fame day, the 20th Inftant, the fatisfaction to inoculate thirteen healthy fubjects and feveral others on the day following, upon all of whom I had the pleafure to obferve the progreffive ftages of the Cow-pox correfpond exactly with thofe defcribed in the treatifes of Doctors Jenner and Aitkin on that difeafe.—In the hopes of your being fuccefsful with thefe threads in producing this mild difeafe and that it will foon be univerfally introduced over all India in fubftitution of that loathfome, dangerous and formidable one the fmall pox. I am &c.

GILBERT HALL,
Surgeon H. M. Malay Regiment.
Trincomallee 28th Auguft, 1802.

Mr. A. KENNEDY, Surgeon at Camp near Hydrabad, to Doctor JAMES ANDERSON, P. G. Madras.

I have the pleafure to enclofe you a piece of thread well moiftened with vaccine matter, taken this morning from a healthy European child above ten months old—This child along with four others was inoculated on the forenoon of the 25th with matter produced by Mr. Ure in the refidency, and of which a portion was fent to you, the Difeafe has taken place in all the five Children, and is running its courfe in the ufual favorable manner.—In the Child from which this matter was taken, and which was inoculated in both arms, there is only one puftule in the neighbourhood of one of the inoculated places.

Having inoculated fome more children this morning, I fhall have it in my power to tranfmit a frefh fupply in the courfe of fix or feven days more, and as I mean alfo by to-morrow's Tappal to fend fome to Mafulipatam, the period of its reaching the coaft if it has not already taken effect, cannot be far diftant.

It is fomewhat remarkable, that all the five Children, had a flight degree of heat and feverifhnefs, in the very night fucceeding the inoculation, this was remarkable from the parents of each of them, and this coincidence may render it worthy of attention in order to afcertain, whether by the regularity of this occurrence fo early in cafes where the difeafe actually takes place, a criterion might perhaps be eftablifhed of judging fo

soon of the efficacy of the inoculation, which would always be satisfactory.

A. KENNEDY.
Camp near Hydrabad, 30th August, 1802.

Captain G. R. COLLIER, to Doctor ANDERSON.

I have the pleasure to forward you a paper of the Vacaine Matter, which was committed to my care by Dr. Andrews of Trincomallee last Sunday.—The inoculation has succeeded on board the Victor as well as on board H. M. Ship Victorious; so that should even the accompanying threads fail, there can be little doubt but of complete success from one or other of these ships.

GEORGE R. COLLIER.
H. M. Ship Victor, Madras,
Wednesday morn.

Mr. W. ANDREWS, Surgeon at Trincomallee, to Doctor JAMES ANDERSON, P. G. Madras.

Agreeable to a promise I some days since made Lieut. Anderson, I have the pleasure to send you by the Victor, Captain Collier, some Cotton Thread pretty well impregnated with the Vaccine Matter, taken from a healthy European child this morning.

W. ANDREWS,
Surgeon, 19th Regt. Foot.
Trincomallee, Sept. 5th, 1802.

Doctor ANDERSON to Mr. ALEX. KENNEDY, Surgeon to the Subsidiary Forces at Hydrabad.

It gives me the greater pleasure on account of our failure here, to learn how successful you and Mr. Ure have been with the Cow-Pox at Hydrabad, and as you remark on the 30th Ultimo the Fever reported to have taken place on the night of inoculation, I will observe that it differs so much from all other accounts, that I think the Parents might have noticed the same Fever every night when fresh Chyle comes into the Lacteals after digestion had they been equally attentive, a degree of heat too is generally observable on the accession of sleep.

The favorable situation of your station for establishing and spreading this beneficial disease, and your known zeal and ability, induce me to trouble you with this letter, as the best means in my power to forward the advantage to be derived from your exertions, without encroaching too much on the service, which cannot admit Gentlemen to do a great deal more than take the lead in a business of this nature at their respective stations, and in so extensive a country, until the practice is taken up by the people themselves, the benefit to be expected is circumscribed, and comparatively less considerable; wherefore a clear, distinct, and continued impression must be made on their minds before they are convinced that a disease so slight will arrest the Small-Pox.

In this view I will mention what may perhaps not yet have occurred to yourself, that there are most probably at Hydrabad a number of Arabians, who gain a livelihood by couching the Cataract, cutting Fistulas and practising other branches of Surgery; as I have seen above fifty of that description perform the operation of couching with considerable ability, and restore the sight of more than three hundred persons in the course of a month.

The Vaccine matter is no doubt by this time in the hands of all the professional men in your department, and therefore I could now wish you to employ likewise these Arabians who are already in possession of excellent Lancetts, and will readily enrol themselves under your banners as inoculators, they will perform in public, and thus instruct the Natives, so that you may soon have the pleasure to see every Mussulman, with whom we know from Lady Montagu the practice is familiar, inoculate his own child from the arm of that of his neighbour.

The inoculation having succeeded first in the residency is a favorable circumstance, as it bids fair to ensure every countenance from the Durbar of a Prince who has long been remarkable as a Patron and Admirer of the arts of utility as well as those of elegance, and should farther support be necessary it may be reasonably expected in consequence of the Medical Board having yesterday submitted the consideration of Vaccine inoculation to the Government here.

I am well satisfied that the receipt of this virus in an active state is not far distant, and a similar plan having been adopted and acted upon in favor of Small-Pox inoculation with very great success, it remains only to consider, which of the two diseases shall have the preference, for Advocates are not wanting on either side, but the circumstance of Cow-Pox being only communicable by inoculation inclines me to think that it will be found most conducive to the Security and welfare of the community.

To day I have received an account from Mr. Christie at Columbo of the disposition to send actual Patients in succession from stage to stage, but one thing I must recommend particularly to you who are our Sheet Anchor, that you will not inoculate all proper subjects of this disease immediately, but on the contrary, take special care to keep a few in reserve for inoculation at intervals, which will require some attention, as it appears that this virus is efficient only betwixt the sixth and eleventh day of the disease, and none of the multitudinous publications tell us how long it may be preserved in the deoxygenated Gasses.

JAMES ANDERSON,
PHYSICIAN GENERAL.
Fort St. George, Sept. 11, 1802.

THOMAS CHRISTIE, Esq. Sup. Surgeon General, Columbo, to JAMES ANDERSON, Esq, P. G. Fort St. George.

I have much pleasure in acquainting you, that after various failures at almost every station on this island, they have at length succeeded in introducing the true vaccine disease at Trincomallee.

A silver canula containing threads impregnated with vaccine matter taken from the arm of a child of European Parents, by Mr. Scott at Bombay on the 8th day from inoculation, being the 10th of July, was received at Trincomallee on the 11th of August. Several Patients were inoculated with this matter, on the same day, by Mr. Rogers, but as in former cases it failed of success in all, except in John Sybelle a half cast boy of 18 years of age, in whom it fortunately produced the disease.

On examining the arm of this boy on the 20th, there was found a distinct pustule bearing the characteristic marks of the Cow-Pox, and attended with pain in the axilla and slight fever. Mr. Hall Surgeon of the Malay Regiment who, in the absence of Mr. Rogers attended the patient, immediately pronounced it to be the vaccine disease, and on that day being the 9th from inoculation, he took matter from his arm, with which he

inoculated thirteen patients, in all of whom I learn from Mr. Hall, the disease was evidently produced on the 26th August, being the seventh day of the inoculation.

Altho' the fortunate success attending the inoculation of John Sybelle, with matter thirty-two days old, should teach us not absolutely to despair of succeeding with dried matter, even after a considerable time has elapsed, yet as the communication of the disease in this way, is no doubt very uncertain, I have recommended to His Excellency the Governor of Ceylon, to order inoculated patients to be sent from one station to another over this island, and also to Negapatam and Madras; at the same time that supplies of matter will be circulated by Post for trial.

Instructions to this effect were transmitted to Trincomallee on the 24th of August, the day on which I received the report of the success of the inoculation on John Sybelle, so that it is possible you may have received matter from Trincomallee, and even infected patients before this reaches you. I have the honor to be, with much respect and esteem,

THOMAS CHRISTIE.

Columbo, Sept. 1st 1802.

ALEXANDER KENNEDY, Esq. to Doctor JAMES ANDERSON, P. G. Madras.

I have the pleasure to enclose a fresh supply of vaccine matter, taken from the pustule this morning.—Whether it should reach you in an active state or not, I now deem of less consequence, as from the matter sent to Masulipatam and Guntoor, I think it probable that the disease may have been already introduced at one or both these places.

I have inoculated twelve children, all of whom have had the disease in the most favorable manner, and from them I have supplied all the Medical Gentlemen here with matter.—Each of them is doing something towards diffusing the benefit and knowledge of this most invaluable discovery; and thought we still find some difficulty in procuring patients yet as the number of children at present under the disease in Camp is probably more than twenty, and all the Commandants of Corps seem fully disposed to give it every countenance and support, I have no doubt but the prejudices of the Natives will soon be entirely removed and the practice of vaccinating their children become universal.

As yet I have had no opportunity of putting it to the Test of inoculating with variolous matter, but this I mean to do the very first opportunity.

ALEXANDER KENNEDY.

Camp near Hydrabad, Sept. 5, 1802.

Doctor SCOTT of Bombay, to Doctor JAMES ANDERSON, P. G. Madras.

I have just received the letters that you were so good as write me on the 17th of last month—I am concerned, but I am not surprised to find that all your inoculations with the matter of the cow-pox have hitherto failed—you must have observed by the first letter that we published here that we were for a long time not more successful at this place—we succeeded at last, nor can we claim any merit but that of perseverance—a few particles of this matter retain now and then for a long time their power of producing the disease, but it is only by numerous trials that any of them are likely to be called into action. The success that attended the vaccinations at Bagdad, at Bussora, and at this place, tend to prove that this Animal matter may retain its peculiar organization for a long time, or perhaps to speak more properly that

a very ſmall part of it from peculiar circumſtances may retain it.—Dr. De Carro carried ſome in his pocket-book in a bit of paper for about 6 months when it produced the diſeaſe in its genuine form. It is however to be in general regretted that the peculiar qualities of the matter of cow-pox are extremely fugitive, nor does the ſucceſs of the method of keeping it in Hydrogen gas appear to be confirmed by experience.—In a letter that I received two days ago from Sir Joſeph Banks, he ſays "I ſhould have ſent you cow-pox matter had I thought it poſſible to keep it half the time neceſſary for an over-land paſſage, in truth the attempts to ſend it even to different parts of England ſucceed ſo ill that much inconvenience ariſes to practitioners—I hope however you have by this time obtained it by the courſe of ſucceſſive inoculations which I underſtood have been undertaken on board ſome of the Eaſt-India Company's ſhips."—After all I would not have you to deſpair at Madras, the whole of the matter may not be inert "*latent ſcintillulæ forſan*"—The beſt method of inoculating with threads ſeems to be that of Dr. De Carro, he cuts them of the length of about 1-5th of an inch, and having made inciſions thro' the cuticle of a length ſomewhat greater he inſerts the dry threads, he ſeems to think moiſtening them is injurious, two inciſions may in this way be made very near to each other, over them a bit of linnen ſhould be laid and the whole ſhould then be ſecured by ſome plaiſter and a bandage. There can be no objections to uſing a number of inciſions with the threads for by that means the chance of ſucceſs is increaſed while it is improbable that any of them ſhould produce a puſtule—after you have produced a ſingle puſtule the difficulty is at an end—it ſeems then as eaſily communicated by inoculation as the ſmall-pox. We have now vaccinated above 600 children at this place, and we have every reaſon to be ſatisfied with this admirable diſcovery; it would be doing it the greateſt injuſtice to compare it with even the mildeſt kind of inoculated ſmall-pox. The cow-pox matter ſent from hence has failed at Calcutta and at Poonah.—We have heard nothing from Hydrabad it however has ſucceeded very well at Surat, and by this time I hope it has been introduced into Guzzerat where the Gwikar Government have expreſſed a ſtrong deſire for it—We ſhall immediately endeavour to ſend children to Poonah and other ſtations on the way to Madras after they have been vaccinated—This will ſoon enſure you of the diſeaſe, altho' I ſtill think it probable that you may produce it before their arrival—As the ſeaſon is now open for the Malabar Coaſt by ſea, they will ſoon get the Cow-pox at Cochin and Calicut from which you may perhaps fall on means of getting it to Madras. It is very unlucky that to this moment we have not been able to procure any variolous matter for inoculation, this is the laſt and moſt neceſſary proof that we are in the right path—I entertain indeed no doubt but that we are in poſſeſſion of the genuine cow-pox. We have given you its genealogy, the ſymptoms of it are regular, the periods of it and the appearances are ſuch as all practitioners in Europe have obſerved, ſtill I ſhall not be entirely ſatisfied in this new climate, until I have ſeen it put to the proof of variolous inoculation.

I ſend you a tube containing threads that have been well ſoaked in the vaccine virus. I beg of you without delay to give them a farther trial. Your account of the diſeaſe of cattle from Ceylon was very intereſting to me, I had not before obſerved that any thing had been publiſhed on the ſubject.—It is preciſely the diſeaſe that does ſo much miſchief here to the huſbandman—The Materia Medica that has been called in to combat it appears to be very unequal to the taſk, we muſt try the Cow Pox, for this diſeaſe, I find that cattle are very unpleaſant patients when we attempt to vaccinate them—I fear you will hardly

be able to read this scrawl, but I am anxious not to lose the post.

H. SCOTT,
Bombay, 9th Sept. 1802.

Doctor ANDERSON's Answer.

Favored with your Letter of the 9th inst. in fifteen days, I immediately issued the matter it contained to Mr. Caudmont, Surgeon of the Meuron Regiment, and to Mr. Wise Surgeon of a Native Regiment, who have proper patients, and seeing that your assiduous attention has established the Cow Pox at Hydrabad I have much pleasure in acquainting you, that we have official accounts of its introduction at Masulipatam, from whence the road will soon be cleared for its conveyance to Calcutta and Madras, by the laudable diligence of the Superintending Surgeon there, Doctor Harris.

By a letter from Mr. Carnie at Jaffnapatam of the 18th inst. I am informed that he has sent inoculated Children to Negapatam, the arrival of whom is acknowledged by Mr. Spalding, Surgeon there on the 21st, and Mr. Carnie is now on the road to meet a detachment of Patients from Columbo, so that the repeated failure of transported matter, having awakened public attention to the better method of inoculating with recent matter, will prove a great means of more certainly diffusing the disease. And the Ceylon Advertisement containing the principal arguments that appear in favor of Cow Pox, especially No. 6, will be a valuable Publication amongst the Natives when translated into the different country languages.

Mr. Miller, Superintending Surgeon at Ballary in the Ceded Districts, writes, that two different Gentlemen have brought matter there from Hydrabad, but I trust that the time is approaching when this Archeus will be conveyed in the humours of living subjects, without lessening the respect which is due to Doctor de Carro's Pocket Book.

Mr. Rogers who inoculated John Sybille at Trincomalle, arrived here two days ago, and tells me, that he has a Child on board the ship on which he came from Ceylon, whom he thinks the Cow Pox inoculation has succeeded on, the result of which I shall know to-morrow or next day, and so far you may consider us possessed of the disease, and I have likewise the pleasure to tell you who have done so much for this first object of humanity, that Government here have ordered the Medical Board to furnish them with a Plan for the best mode of practising the Cow Pox inoculation and obviating the deleterious effects of Small Pox, and here the most valuable circumstance that can be considered new—is the practice of Guntoor by a Man named Nagalingam, who has lately inoculated 18,000 for Small Pox without an accident, with a Pencil of Small Needles hidden in the corner of a Muslin Hankerchief which he dips in the matter of a Pustule and immediately strikes the arm of the Patient, so that the Needles penetrate the Cuticle through the Muslin, moistened with matter without much alarming the child.

That this practice is of infinite consequence is obvious, as the brandishing a naked Lancet in the hand of a European, not only sets the Children a screaming and crying, but likewise calls up the tender affections of the Parents, and with a people of so much sensibility as the Natives of this hot climate, the abstract Idea of preventing loathsome Small Pox is lost, and the mind distressed and overwhelmed with present terror so much, that I found it impracticable to bring them back to a repetition of the operation, however necessary and proper it might be represented: I am therefore of opinion, that this mode of inoculating with a Pencil of Needles hidden in a bit of Muslin rag, will be a necessary practice for general inoculation.

The zeal of professional men is so

conspicuous, there can be no doubt of their following up this inoculation to the utmost of their power and greatly to the credit of administration on Ceylon; I am well informed the Salaries for inoculation of Small Pox are continued to the Surgeons for Cow Pox inoculation on that Island; the wisdom of which measure will support a practice that must always be attended with considerable trouble and vexation, by rendering it the particular interest of persons duly qualified.

As we have no instance of climate altering the specific nature of variolous Poison, for the same reason I cannot suppose that climate will alter or diminish that action of the Cow Pox which renders the system incapable of being affected by the variolous, as proved by many thousand experiments in Europe.—Mr. Kennedy at Hydrabad is inoculating with variolous matter, and here the Satisfaction of Parents may require it, who can only be convinced by occular proof, or what has been tried on the Spot, so that every possible doubt on this head will soon be done away. I enclose you some variolous matter, although it is difficult to be procured even here, where the small pox rages, on account of religious prejudice; but will not fail to send you more when I can possibly procure it, until you have satisfied yourself in this particular.

The doubt which you likewise express of the preservation of Vaccine virus is of great consideration, for it appears that unless the inoculation is continued in succession weekly, the virtue of it is liable to be entirely lost, so as to throw us back on Europe to look for it again, as I have never heard that the Cows of this Country are subject to pustular eruptions on the nipples ending in curable Phagedenic Ulcers; the disease of Cattle called Small Pox, being a defluxion from the mouth which excoriates the tongue of the animal, and loosens the Hoofs, tending rapidly to death in a great proportion of them, and that on the heels of horses being generally more of a warty than greasy appearance, I am therefore glad to see that you have taken up the Idea of inoculating cattle with the vaccine matter, to prevent the murrain: as in case you thereby bring pustular eruptions upon the Nipples of a Milch Cow, it may prove the best means of preservation and securing a stock of matter for the use of future generations in India.

The repeated failure of transported matter and uncertainty of success with it every where; together with the near approach of Children affected with the disease from different quarters, renders me less anxious about making any farther trial here until such children actually arrive, but as great advantage attends the transport to a distance when it happens to succeed, I have adopted the plan of issuing such matter as now arrives to the Superintending Surgeons in land, whereby some has been forwarded to Conjeveram and Arcot, by Doctor Berry of the Center Division, where it may possibly succeed better than in our oxygenous atmosphere, and having sent copies of what appears in the Government Gazette on this subject to the Surgeons in the direction of approaching Cow Pox, any necessary preparation for its reception is thereby ascertained.

J. ANDERSON,

Fort St. George, Sept. 27th 1802.

Mr. CARNIE, Surgeon of Jaffnapatam, to JAMES ANDERSON, Esq. &c. &c. &c.

I have this day sent on board of a vessel bound to Negapatam two Children inoculated with Vaccine Matter, which I hope will produce a pustule fit for use on the 21st or 22d Instant.—I shall very likely bring one or two Children with me to Madras early,

next month, should I not have heard that you as yet succeed in introducing that mild disease. I intend proceeding with children tomorrow on the road towards Columbo, where I shall be met by Mr. Orr Medical Suprintendent, who is to bring with him children to receive the infection. The matter sent here on threads from Trinco nallee did not answer, which shews how very fortunate Mr. Rogers has been in succeeding with that sent from Bombay. I brought the pock on living subjects from Mullative. where I inoculated several children on the 13th inst.—I also inoculated several children at Point Pedro and at this place, where, when the matter is fit for use I hope we shall find sufficient employment. I beg leave to enclose you a copy of an address to the Natives of this Island which I hope will tend to do away every prejudice against the practice of inoculation amongst them. Some of the principal Inhabitants have applied to me already to get their children inoculated with vaccine matter, whom I could never prevail upon to submit to be inoculated from that of the small pox.

J. CARNIE,

Jaffnapatam September 18th, 1802.

ADDRESS to the NATIVES of CEYLON.

The experience of several years has fully proved, that the inoculation for the Cow-pox, is a certain preservative against the Small pox, and is, besides, so mild and safe a disorder, when compared with the inoculated Small pox, that it has been generally introduced among the inhabitants, both of Great Britain, and of various parts of Europe. In order therefore to impress strongly on the minds of the Natives of this Island, the usefulness and superior advantages of this new plan of inoculation. Government has thought proper to state in this public manner the following observations for the serious perusal of all those persons, who are desirous of promoting their own interest and comfort.

1st—Inoculation for the Cow-pox has been practised for several years with constant success, in various parts of the world.

2d It has never failed to prevent the infection of the natural Small-Pox, nor has any person ever died of it, although Millions have been inoculated.

3d—It may be communicated with safety to persons of every age and sex, and at all times and seasons of the year with equal advantage.

4th—The Cow-Pox is much preferable to the inoculated Small Pox, as being a milder and safer disease, and not capable of infecting the persons lying in the same bed.

5th—It does not produce eruptions which scar and disfigure the face. and is never attended with any other marks of the disease than what appear on the arms from inoculation.

6th—Neither Swellings, Blindness, Lameness, nor any other Complaint, which are known frequently to be the consequences of the Natural Small Pox (and sometimes, tho' but seldom of the inoculated Small Pox) have been known to follow the Cow Pox.

7th—Alarming fits frequently seize children when sickening of the Small Pox, and while cutting their teeth, this disorder often proves dangerous. But no such objections lie against the Cow-Pox.

8th—So far from proving hurtful, delicate and sickly children are often improved in health by having passed thro' this complaint.

9th—Scarcely any remedies or attendance are required for the Cow-Pox.

10th—There is no necessity for a course of Physic either before or after inoculation.

11th—The time of the Parents will not be taken up in attendance on the Sick, to the injury of the support of the rest of the Family: and

to poor families, this is an object of great importance.

The prejudices of the natives of this Island against inoculation for the Small pox, by which thousands of lives have been annually saved, has often been lamented; and if they suffer unjust prejudices to prevent their laying hold of the advantages now offered to them, by the inoculation of the Cow Pox, they will neglect the performance of a duty they owe to themselves, to their families and to society at large.---For surely it is little less than criminal, to expose their helpless children to the attack of so terrible and fatal a malady as the Small Pox, when it may be readily avoided by the inoculation of so mild, simple, and safe a disease as that of the Cow Pox. Government has intrusted the care of preserving this contagion and of diffusing the benefits of this most useful discovery, to the Inspector of Hospitals and Medical Superintendants and Overseers at the different stations, who will inoculate gratis all persons who wish to secure themselves against the Small Pox, and who will convince, by ocular demonstrations, any Native Doctor, or other person, of the innocence of this disease, and the perfect security it affords against that dreadful malady the Small Pox.

Mr. COLIN ROGERS, Medical Superindant at Trincomallie, to Doctor J. ANDERSON, P. G. Madras.

You must long ere this have heard with pleasure of the successful introduction of the Cow Pox at Trincomallie, where I had first the good fortune to produce the disease by inoculation with matter sent from Bombay on the 10th July by Doctor Helenus Scott.--- On the 11th August the day on which this matter arrived here, I inoculated six Children, out of which number one succeeded in John Sybelle, a Boy of ten years old; from him a succession of subjects have been inoculated, and in all the genuine Vaccine disease appeared, and it has since been promulgated to the districts of Mullative & Jaffnapatam, from whence it will soon be extended to the Coast. As you have not yet succeeded at Madras, I take the liberty to enclose you some Cotton threads imbued with Vaccine matter taken this day the 9th of Inoculation from a child of European Parents, the pustule on whose arm furnished matter for the Inoculation of seven Children besides.—Every friend to humanity must wish you success in your endeavour to introduce and diffuse this valuable disease, which is proved to be a safe and mild antidote for that most loathsome and fatal one the Small Pox, which 'tis to be ardently hoped will soon be extirpated from this Country.

His Excellency Governor North, impressed with the importance of the discovery, has prohibited the further admission of Patients into the Small Pox Hospital, which he means to suppress at the end of the present month, when the attention of the Medical Superintendants and Overseers of that Establishment will be confined to the propagation of the Vaccine disease; thus completing the chain of humane and liberal improvements for which His Excellency is so eminently distinguished.

COLIN ROGERS,
Med. Superintendant.

Trincomallie, 14th Sept. 1802.

Mr. THOMAS SPALDING, Surgeon at Negapatam, to Doctor JAMES ANDERSON, P. G. Madras.

I received your favor yesterday containing the printed Letters about the Cow Pow Inoculation. Mr. Carnie, Surgeon at Jaffnapatam sent me a boy with his Mother, who came to me yesterday; the boy he

had inoculated on the 19th Instant, and the part has inflamed and there was a quantity of matter this morning when I saw the child at 6 o'clock and went to get threads to impregnate with the matter, but before I returned not ten minutes the Child had rubbed himself against something and the matter was all gone. —To prevent the like accident, I cut the thread into about ten pieces and placed on the top of the sore Gum Plaister, in the centre the threads. I have this evening taken off the plaister, and the threads are all matted together with the Cow Pox matter. The moment I took off the plaister with the threads I instantly rolled up the plaister with the threads in the centre and immediately put it in the enclosed quill and waxed the ends of the quill. When I took off the plaister I instantly rolled it up, so that no air got to the Cow Pox except from the moment of taking it from the sore and rolling it up, which I did instantaneously.—The Tappal I am afraid of losing. I shall write and send more matter to-morrow. I inoculated one Lady and five children from this boy this evening.

THO. SPALDING.

Negapatam, 21st Sept. 1802.

Mr. THOMAS SPALDING, Surgeon at Negapatam, to Doctor JAMES ANDERSON, P. G. Madras.

I sent you Cow Pock matter last night. I send you threads that lay on the sore all night confined within a circular plaister. In the centre there is no plaister but only round the edges so as to confine the threads on the sore that the matter issuing from thence might fully impregnate the threads.

Mrs. Mackay and Children were inoculated last night. Mr. Richardson, the Commercial Resident's Child was inoculated at Jaffnapatam five or six days ago, but it did not seem to have taken effect and was again inoculated last night but none had any fever. Two had slight inflammation round the puncture.

I trust those enclosed this evening to be fully impregnated, and from the care I have taken to prevent access of air to the matter I have little doubt of success.

I have this evening sent threads impregnated with matter to Dr. Richardson at Trichinopoly who of course will receive them to-morrow morning and have no doubt from the shortness of time of taking the matter that it will succeed.—

THO. SPALDING.

Negapatam, 22d Sept. 1802.

Doctor H. SCOTT, of Bombay, to Doctor JAMES ANDERSON, P. G. Madras.

I have just received a Letter from Mr. Ure, at Hydrabad, saying that in several instances they have produced the Cow Pox there from Matter sent by me. From the detail of the circumstances attending the disease of Hydrabad I am extremely doubtful indeed if it be the genuine Cow Pox. The small Pox has been prevalent there and perhaps a hybridous disease (if such a word may be applied to disease) has arisen. I am induced to suspect this from the account that Mr. Ure has sent me. He inoculated two Children on the Morning of the 18th of last month. On the evening of the 22d they both had a slight degree of Fever. "On the morning of the 23d says Mr. Ure," I perceived three well marked "and distinct pustules on the arm "near to the spot where the matter "was inserted; the other child had "four pustules and two days after a "fifth appeared. I inoculated on "the 24th five children from the

" Girl who had the three pustules, " and I am happy to say that all of " them have got the disease in a very " mild form." The appearance of Pustules at Hydrabad has greatly surprised me, The Cow Pox is certainly not attended with Pustules. The few eruptions that Dr. Jenner has seen do not deserve that name. Dr. De Carro never met with pustules in his practice ---The Hanoverian Physicians complained to him that the virus which they had got from England produced pustules with them; and it is remarkable that this very matter sent to Vienna to Dr. De Carro no longer was attended with pustules while Dr. De Carro's matter transported to Hanover produced the Vaccine disease unattended with any pustular eruption. In six or seven hundred cases that we have now seen of the Cow Pox at this place we have not seen a single pustule except the one at the points where the lancet enters. The word pustule is an unlucky name for the local disease produced by the vaccine matter. It leads people without experience of that disease to suppose that it resembles the pustules of Small Pox to which it has no relation either in its structure or contents.

I farther observe that Mr. Ure, inoculated on the 24th from Children to whom he had communicated the disease on the 18th---We have seldom been able here to get the virus at so early a period, altho' Dr. Jenner recommends it to be taken from the 5th to the 8th day, and even under some circumstances a day or two later. We have found the 8th day the best for this purpose but have occasionally with success taken the virus on the 7th and 9th.

The circumstance of the Pustules has excited chiefly my suspicion that the disease of Hydrabad is an Anomaly of which I do not pretend to determine the cause. The description I have hitherto received of it is very short, but I have thought it my duty as soon as possible to communicate my suspicion to Dr. Ure, as well as to you. I may be altogether wrong, and I shall anxiously wait for farther details on the subject.

I have just received a Letter from Doctor Jenner accompanied by a late publication of his giving a history of the progress of his discovery which is very interesting. He also sends me the last directions that he has printed on the subject of the Cow Pox. As you perhaps have not yet seen them I enclose them to you. That part of them which relates to the decomposition of the Vaccine fluid and the destruction of its specific qualities is highly worthy of attention. Perhaps too you have not seen De Carro's work, for I imagine it is not translated into English. It came to us overland from Vienna. I shall be happy to send it to you if you have not read it. After all you have seen it will still afford you amusement and instruction. You will I think agree with De Carro that this is a subject which embraces already a vast variety of facts and that it requires more knowledge to practise with success the vaccine inoculation than is required for the Small Pox.

We shall now find no difficulty in introducing the Cow pox at Seringapatam, where I am happy to know that General Wellesley takes an interest in the subject.

You need make me no apology for having published my Letters. It is a crime on this subject to be silent. We are not looking for personal reputation; we are neither in search of fame nor money. From all quarters we ought to know the progress that has been made, and I hope, that every Medical man in India, will lend his aid in spreading this blessing to humanity, and his assistance in celebrating a triumph of his profession.

H. SCOTT.

Bombay, 11th Sept. 1802.

INSTRUCTIONS *for* VACCINE INOCULATION.

Let the vaccine fluid be taken, for the purpoſe of Inoculation, from a puſtule that is making its progreſs regularly, and which poſſeſſes the true vaccine character, on any day from the fifth to the eighth, or even a day or two later, provided the efflorescence be not then formed around it. When the efflorescence is formed, it is always moſt prudent to deſiſt from taking any more of the virus from that puſtule.

To obtain the virus, let the edges of the puſtule be gently punctured with a lancet in ſeveral points. It will gradually ooze out, and ſhould be inſerted upon the arm about midway between the ſhoulder and the elbow, either by means of a very ſlight ſcratch not exceeding the eighth part of an inch, or a very ſmall oblique puncture.

A little red ſpot will appear on the punctured part on the third day, if the operation ſucceed, which on the fourth or fifth becomes perceptibly veſicated. It goes on increaſing till the tenth day, when it is generally ſurrounded by a roſe-coloured efflorescence, which remains nearly ſtationary for a day or two. The efflorescence then fades away, and the puſtule is gradually converted into a hard gloſſy ſcab, of a dark mahogany colour. Theſe progreſſive ſtages of the puſtule are commonly completed in ſixteen or ſeventeen days.

A ſingle puſtule is ſufficient to ſecure the conſtitution from the ſmall-pox; but as we are not always certain the puncture may take effect, it will be prudent to inoculate in both arms, or to make two punctures in the ſame arm, about an inch and a half aſunder, except in very early infancy, when there is a great ſuſceptibility of local irritation.

If the efflorescence ſurrounding the puſtule ſhould be extenſive, and occaſion much local heat upon the arm, it may be cooled by the repeated application of pieces of folded linen dipped in cold water; or ſtill more expeditiouſly by a ſtrong ſolution of the *aqua lythargyri acetati** in water; an ounce, for example, of the former in five or ſix of the latter.

If the ſcab ſhould at any time be prematurely rubbed off, the part may be occaſionally touched with the undiluted *aqua lythargyri acetati.*

Vaccine virus, taken from a puſtule, and inſerted immediately in its fluid ſtate, is preferable to that which has been previouſly dried; but as it is not always practicable to obtain it in this ſtate, we are compelled to ſeek for ſome mode of preſerving it. Various means have been ſuggeſted, but from the teſt of long experience it may be aſſerted that preſerving it between two plates of glaſs is the moſt eligible. Let a piece of common window glaſs be cut into ſquares of about an inch each, ſo that they ſhall lie ſmooth when placed upon each other. Let the collected vaccine fluid be confined to a ſmall ſpot about the ſize of a ſplit pea, under the centre of one of theſe glaſſes; which ſhould be ſuffered to dry in the common heat of the atmoſphere, without expoſure to the heat of the fire or the ſun. When dry, it ſhould be immediately ſecured by placing over it the other piece of glaſs. Nothing more is neceſſary for its preſervation than wrapping it in clean writing paper.

The virus, thus preſerved, when wanted for the purpoſe of inoculation, may eaſily be reſtored to its fluid ſtate by diſſolving it in a ſmall portion of cold water, taken up on the point of a lancet. It may then be uſed in the ſame manner as when juſt taken from a puſtule.

The vaccine fluid is liable, from cauſes apparently trifling, to undergo a decompoſition. In this ſtate it ſometimes produces what has been denominated the ſpurious

* Goulard's Extract of Saturn.

pustule; that is, a pustule, or an appearance on the arm not possessing the characteristic marks of the genuine pustule. Anamalies, assuming different forms, may be excited, according to the qualities of the virus applied, or the state of the person inoculated; but by far the most frequent variety, or deviation from the perfect pustule, is that which arrives at maturity, and finishes its progress much within the time limited by the true. Its commencement is marked by a troublesome itching; and it throws out a premature efflorescence, sometimes extensive, but seldom circumscribed, or of such a vivid tint as that which surrounds the pustule completely organized; and (which is more characteristic of its degeneracy than the other symptoms) it appears more like a common festering produced by a thorn, or any other extraneous body sticking in the skin, than a pustule excited by the vaccine virus.

It is generally of a straw colour; and when punctured, instead of that colourless, transparent fluid of the perfect pustule, its contents are found to be opaque. That deviation from the common character of the pustule, arising from vaccine virus which has been previously exposed to a degree of heat capable of decomposing it, is very different. In this instance, it begins with a creeping scab, of a pale brown or ambour colour: making a long and slow progress, and sometimes going through its course without any perceptible efflorescence. Its edges are commonly elevated, and afford, on being punctured, a limpid fluid.

A little practice in vaccine inoculation, attentively conducted, impresses on the mind the perfect character of the vaccine pustule; therefore, when a deviation arises, of whatever kind it may be, common prudence points out the necessity of re-inoculation, first, with vaccine virus of the most active kind, and secondly, should this be ineffectual, with variolous virus. But if the constitution shews insusceptibility of one, it commonly does of the other.

When any constitutional symptoms occur in inoculated Cow-pox, they are commonly first perceptible (especially in children) on the fourth or fifth day. They appear again, and sometimes in adults, not unlike a mild attack from inoculated small pox, on the eighth, ninth, or tenth day. The former arise from the general effects of the virus on the habit, the latter from the irritation of the pustule.

If the effluvia of the small pox have been received into the habit previously to the inoculation of the vaccine virus, the vaccine inoculation will not always be found to stop its progress, although the pustule may make its advances without interruption.

The lancet used for inoculation should always be perfectly clean. After each puncture, it is proper to dip it into water, and wipe it dry.

The preservation of vaccine virus upon a lancet, beyond the period of a few days, should never be attempted; as it is so apt to produce rust, which will decompose it.

EDWARD JENNER.

Doctor ANDERSON's Answer.

Your Letter of the 11th with that from Mr. Kennedy of the 21st ult. having come together from Hydrabad, I am glad that a field of investigation is displayed which will ascertain the specific symptoms of Cow-Pox, and remove the necessity of Small Pox inoculation in this Climate.

The Symptoms of Diseases termed Latchmana in the Medical Shasters, having been published in this

Country time immemorial, renders it likewise absolutely necessary to be correct, before the Natives can bring themselves popularly to adopt a new Disease, and forego their ancient records.

The intercourse you expect with the Marratta Government, may serve to elucidate mutual opinions for general satisfaction, and I can only tell you that in exploring the method of cure for 96 Diseases of the Eye, in the Darawanter Shaster, I recollect that medicated Snuff is sometimes directed to produce Sneezing as a remedy, and the actual cautery is so prevalent in Asia to relieve many complaints, that the infliction of a harmless Disease, with a view to remove one that is more terrible is familiar to them.

In No. 36 of the Medical and Physical Journal an extract from the works of Doctor Sacco of Milan, mentions the Cows in Lombardy as supplying matter for inoculation, and indeed it now appears that the disease has been found amongst cattle all over Europe, but as Italy is near the temperature of Hindostan it is not improbable, that Guzerat which produces the finest breed of Cows in the world, may supply this matter in as great perfection as it can be imported from abroad, and be more readily adopted by the Hindoos when they see it actually taken from an animal which they hold in veneration.

I shall publish Doctor Jenner's instructions for Cow Pox inoculation, and subjoin Mr. Kennedy's Letter, which as you suspect, from the rapid succession of symptoms, agrees as well with descriptions of the spurious as the genuine disease; a point which he will not fail to determine by the ordeal of Small Pox, and Mr. Rogers who inoculated on Ceylon, having favored me with a Letter on the subject, I herewith forward a Copy for your satisfaction, having received the accompanying, from Mr. Uic at Hydrabad since the above was written, I think you will excuse the communication on account of the valuable information which it contains.

JAMES ANDERSON.

Fort St. George,
5th Oct. 1802.

Mr. ALEXANDER KENNEDY, Surgeon at Hydrabad, to Doctor J. ANDERSON, P. G. Madras.

I have the pleasure to acknowledge the Receipt of your favor of the 11th Instant, of the five Children all of whom had attack of fever on the night following their being inoculated with the vaccine matter, two were inmates of my own house, and I had an opportunity of seeing them both next morning before Break-fast, while the fever was yet upon them.—Two others of them, were the Children of European Parents, whose reports and observations may therefore be the more relied upon, though in them the fever had gone off before I saw them towards mid-day. Mr. Howard who has since then inoculated a good many Children, has made the same observation with regard to three of his patients, in each of whom a distinct and well marked fever commenced about eight hours after the inoculation & continued about twenty four hours. Though is has not since come again under my own notice, I dare say that further observation will shew that such an occurrence does occasionally take place, and that where it does the disease may be confidently expected to follow.

The first mention I ever heard of the Arabian Physicians who formerly practised so successfully at this place, was when a guest at your own house in the year 1796 or 1797, and having never before heard of them during five years service in this part of the country, I remem-

ber being a good deal ſurpriſed at the account you then gave of them. Since my return to this ſituation, I have made ſundry enquiries after them but hitherto unſucceſsfully. Not wiſhing however in a matter of this importance to leave room for a miſtake, I yeſterday carried your Letter to Mr. Ure at the Reſidency. I fortunately found him juſt about to go to the Durbar upon the vaccine buſineſs, and I have no doubt that if ſuch people are now actually to be found here, Mr. Ure through the Reſident's influence will be able to bring them forward. I ſuſpect however that they have long ago left this place for ſome other more propitious to the practitioners of ſuch uſeful branches of Science, as thoſe you mention, eſpecially as I underſtand, that either the Miniſter's or his Highneſs's Barber was the perſon ſent the other day to Mr. Ure to be inſtructed in the vaccine inoculation. The Omrahs I find are all very ſolicitous to have the benefit of this newly imported inoculation for their own families and Mr. Ure has in conſequence inoculated ſeveral Children of the families of men of Rank in the city. So far as example goes the introduction of this Bleſſing would ſeem to be in a fair way in the city of Hydrabad, and I hope they will alſo ſoon think of adopting means ſimilar to thoſe you point out, for rendering the diffuſion general to people of all ranks.

Mr. Ure has ſhewn me a Letter ſent open to him for your addreſs from Dr. Scott of Bombay in which the Doctor expreſſes his fears that the matter we have been uſing here, may have degenerated into the ſpurious kind. The appearance of an eruption, upon the arm of the ſecond Child who was inoculated here, has given riſe to this conjecture, and it is very certain that an eruption of a conſiderable number of puſtules actually took place upon one of the Child's arms. I examined his arms yeſterday and found the marks of them ſtill viſible and of a light brown or copperiſh colour. Notwithſtanding this I am inclined to believe that the matter is of the genuine kind, and that the eruption in this caſe, ought only to be regarded as an unuſual, and anomalous occurence. There could be no ſuſpicion in this inſtance of any complication with Small pox. The Child upon whom the Diſeaſe was originally produced here, and from whom he was inoculated, had only one ſmall puſtule cloſe to the inoculated place; the inoculation in this Boy himſelf, run through all the uſual Stages in the regular way, the ſcab not falling off till after the 21ſt day, and the ſore which it left is not yet quite healed, what is ſtill more to the purpoſe, is that matter taken from him, has in ſeveral Children whom I ſaw yeſterday, produced the diſeaſe in a form which can ſcarcely be ſuſpected of being ſpurious.

In one European Child a patient of mine in Camp, there was one puſtule produced about the twelfth day on his Buttocks, and in another Child under the care of Mr. Howard, there was one produced upon the Belly. Theſe eruptions were ſhort lived, not laſting more than three or four days, then burſting and leaving a thin ſlight incruſtation behind them. They were, I preſume of the Nature of thoſe called puſtules by the inveſtigators of this diſeaſe in Europe.—The following is a deſcription of the one on my patient—It had no red or inflamed baſe like the Variolous puſtule, in this reſpect approaching very nearly to the appearance of one of the puſtules of the Chicken pox—it was perfectly round and roſe alſo in a Globular form, without any pit, depreſſion or change of colour at the top—Its ſize was nearly that of a large white Currant Berry—it was full of white matter, and from the extreme thinneſs of the veſicle appeared to be ſeated immediately under the cuticle—In my other patients there has been no eruption except now and then perhaps one or two puſtules in

the immediate vicinity of the inocculated spot—I mean to put the genuineness of the matter to the test, by inoculating some of these Children with Variolous Virus as soon as I can procure any.

It may be proper to observe that the scab upon the Arms of my patients has much more of a pellucid horny shining look than of a Mahogany colour—examined by looking down to the bottom of the scab it has a dark shade, but still I think lighter than Mahogany.

I trust the matter has long ere this reached the Presidency in an active state, so far as my limited experience can enable me to judge of the matter, I am ready to believe that the stock it has come from here, is of the genuine kind.

ALEX. KENNEDY.

Camp Hydrabad,
21st Sep. 1802.

Mr. COLIN ROGERS, Surgeon, to Doctor JAMES ANDERSON, P. G.

I am sorry to inform you of the failure of the vaccine inoculation in the child belonging to the ship in which I arrived at the Presidency.

I have been favored with the perusal of Doctor Scott's letter to you of the 11th ult. from which it appears that he is led to entertain doubts that the cow-pox produced at Hydrabad is not the genuine kind, from the circumstance of its being attended there with pustular eruptions. The result of vaccine inoculation at Trincomallee, inclines me to coincide in that opinion, for of about 100 cases inoculated in the months of August and September by other Surgeons as well as myself, there was in general only one distinct pustule or vesication produced on the arm; in cases where there was two, they were so close that I suspected the accidental puncture of the Lancet at the time of inoculation. I am at a loss to account for the striking difference in the effects of vaccine virus derived from the same source, unless perhaps upon the principle of variolous admixture which happened to Dr. Woodville's cases in the Small-Pox Hospital in London, and from the instructive examples there recorded, it appears that the greatest care and skill is necessary to preserve the vaccine disease in a pure uncontaminated state.

The characteristic symptoms of this infection have been divided by authors into local and constitutional, but I confess it is the former alone which I have seen well marked, and place most dependance on.

On the 3d day from inoculation, the first symptom of success was a slight redness surrounding the puncture which appeared a little elevated and this continued to encrease till the 5th day, when it assumed a peculiar vesicular form, differing from any eruption I had ever seen, a depression in the centre was now very discernable, the edges were high, hard, and convex, of a pale whitish colour, all of which became more evident as the vesicle advanced. From the 6th day a fluid is formed within the vesicle which excudes from the edges on being punctured, but in such a manner as to give the idea of its being confined in small cells, for it is only after numerous punctures that the whole can be emptied—This fluid continues transparent to the 10th or 11th day, after which it naturally oozes out, forming a scab that separates about the 18th day unless the process is checked by Caustics.

I could seldom or ever detect the presence of fever in any of my patients, all of whom were young children, but their parents in general acknowledged that they had a very slight fever on the 5th or 6th day, and yet I always found them cool, active and cheerful in every stage of the disease, nor did they require any medicine.

The glands of the Axilla were perceptibly swelled in many of the Children, and gentle pressure seemed to occasion pain—I understand that an officer of the Malay Corps, who had never had the Small Pox submitted to Vaccine Inoculation during my absence from Trincomallie, in whose case the pain in the Axilla was so very severe, as almost to prevent the motion of his arm for several days.

COLIN ROGERS.

Madras, *1st Oct.* 1802.

Mr. GEORGE URE, Surgeon at Hydrabad, to Doctor JAMES ANDERSON, P. G. Madras.

Mr. Scott's doubts about our having the true Vaccine Disease have arisen from the account which I sent to him of the two children whom I inoculated on the 18th ultimo.

I must acknowledge that I was inacurate in saying that there were distinct pustules near to the part where the matter was inserted, red pimples appeared, and from my inexperience of the Cow-pox, believed, would become pustules, but in the course of a few days they disappeared, while the pustules where the matter was inserted went through the regular progress of the disease.

I have inoculated twenty-five children, and in all of them, the disease has gone through its regular course. A number of pimples, that first appeared about the 6th day after inoculation and near to the place where the matter was inserted, in a day or two they began to disappear, but were soon succeeded by others, and there was a regular succession of them till the 24th or 25th day. This eruption nearly extended from the shoulder to the wrist. However, the pustules on this child where the matter was inserted went through the regular course, and the scabs fell of between the 17th and 19th day.

There is no doubt, but that we have got the genuine vaccine disease at Hydrabad, and I am happy to inform you, that I have inoculated several children at the Minister's Durbar on the 5th, 13th, and 20th instant, they have all, as far as I have yet seen, got the disease and only pustules where the matter was inserted. I have got the promise of a house in the city from the Minister where I mean to attend regularly two days in the week, and to inoculate all the children who may be brought to me for that purpose, and no exertion on my part shall be wanting to make the blessing of this happy discovery as general as possible, and I trust that, very soon I shall be able to inoculate hundreds of children weekly. I will also instruct the native practitioners, and do my endeavour to get the Minister to appoint inoculators to the different streets in the city, and to order all the children to be inoculated.

The Minister himself is fully sensible of the high importance of this discovery to mankind, and I believe, will exert his influence, and authority if necessary, to make the vaccine inoculation general all over his Highness the Nizam's dominions. I have seen one of the Arabians whom you mention, he has been sent to me by the Minister's order, and to attend on me on all occasions.

GEORGE URE.

Hydrabad, Sept. 23, 1802.

Mr. W. PRICHARD, Surgeon at Chinglepet, to Doctor JAMES ANDERSON, P. G. Madras.

It is with real satisfaction I forward to you a Native Child six years of age, whom I inoculated on the 1st Instant with the vaccine

matter you favored me with, and which from the appearance of the Child's arm I have reason to hope has taken effect.

The first Symptom observable was on the sixth day after inoculation, when the Child complained of pain in the Axilla, and soreness where the incision was made, she had also some fever— on the seventh in the morning the edges were considerably raised and had a glossy appearance with a depression in the center, and it has now every other appearance of the Pustule described by authors that have written on the interesting subject of Cow Pox inoculation, however should I in the present case be deceived and should it not prove what I sincerely hope it is, the genuine Cow Pox, I trust you will favorably accept my intention.

Knowing your anxiety to make this important disease general, it will ever afford me great pleasure to forward to the utmost of my power your benevolent purpose.

The bearer of this is the Child's Father, who will give you any information respecting the symptoms, which may appear from the date of this——I have just inoculated two Children with the matter from the Pustule, and will inform you of the success.

W. PRICHARD.

Chingleput, Oct. 8, 1802.

Doctor ANDERSON's Answer.

The child Mariamma with her Father named Nyiana Pragasum whom you sent from Chingleput on the 8th, arrived here yesterday in the morning, having passed the preceding night under a Thunder Storm attended with heavy rain, and on examining the sore on her arm after perusing your letter, I was so much impressed with the characters of the disease we are in quest of, that I immediately sent the child to Mr. Dalton, who is occupied at the garden of the Right Honorable the Governor on the business of inoculation, where his Lordship's liberality had assembled a number of poor people, amongst whom proper Patients might most readily be found.

After returning from Mr. Dalton in the evening, who had inoculated three children from her arm, she was examined by Mr. Rogers who declared the disease to be the same as that now established on Ceylon, and at the same time inoculated two boys born at Botany Bay of European parents, where the small-pox has never appeared; and belonging to the ship Hunter, which it is expected will sail to day for Bengal, so that Captain Anderson who commands her is in hopes of landing the vaccine disease at Calcutta, by means of inoculating other children in weekly succession.

Mr. Rogers likewise inoculated from the vesicle on Mariamma's arm two of my servants, the one a man who has never had the small-pox, the other a boy who believes he has undergone the disease in his infancy, and this morning, finding transparent matter still in the vesicle, Mr. Dalton inoculated the Teats and Udder of a milch Cow at my garden that had calved only 8 days ago, the farther inoculation from this child being prohibited by the apprehension of producing a spurious disease, as is said to happen with matter taken after the 10th day from the time of inoculation.

In addition to the symptoms which you have mentioned, I now observe a glossy and slight elevation, as if the cuticle was on the stretch, to the extent of half an inch all round the vesicle, without any red areola in this black Child; but on grasping the whole betwixt the finger and thumb, it appears to the touch, of that kind of firmness observable in the base or Seat of a Phlegmon or Boil, and the matter taken on the point

of a Lancet for inoculating the Cow, appeared of the consistance and transparency of the white of an Egg, or Coagulable Lymph.

You will excuse my detaining the child a few days at Madras, to observe the scabbing process and termination of the disease, and in case it succeeds with the two children whom you have inoculated which you will know by the 14th of the month, I would wish you to send one of them to Mr. Christie at Wallajabad so as to be there before any areola or scab affects the vesicle.

The matter which I gave you was sent to me from Trincomallee by Mr. Rogers, on the 14th ultimo---go on and prosper, and believe me always ready to receive your communications on this subject.

J. ANDERSON.

Fort St. George, October 11, 1802.

Mr. HENRY WILLIAMSON, Assistant Surgeon at Guntoor, to Doctor JAMES ANDERSON, P. G. Madras.

I have the honor to acknowledge the receipt of the Printed Letters reporting the progress made in disseminating the Cow Pox; and beg leave to acquaint you, that I trust to have succeeded in producing the disease at this place; with vaccinated threads favored me by Dr. Harris, I regret very much it is not in my power to procure any other but native subjects, the sable colour of whose skin prevents me tracing with certainty the peculiar progressive inflamation surrounding the vaccine scab; on which account I have deferred forwarding fluid to Neighbouring stations; until by successive inoculation, and observing an uniformity of appearance, I was confident of having produced the genuine disease.

HENRY WILLIAMSON,
ASSISTANT SURGEON.

Guntoor, Oct. 4th 1802.

Doctor ANDERSON's Answer.

I am favored with your Letter of the 4th instant and adverting to the difficulty you express in observing the different shades of colour in the Areola of Cow Pox vesicles on native patients, I am of opinion that this Areola is owing to the enlargement of the capillary vessels of the Skin, being distended with Blood, in the same manner as the red globules find an entrance into the Capillaries of the Sclerotic coat of the eye in inflammations of that organ, and the want of colour will be in proportion to the opacity of the rete mucosum immediately covering those vessels on the surface of the Skin, as the cuticle in all mankind is known to be destitute of vessels, and homogenous in colour; and although the brilliant red Areola described by authors in Europe may not appear, you will perhaps be sensible of some degree of hardness and resistance to the touch; round the vesicle, like what is felt round a common Boil.

As it is however upon the regular progression and periods of the other Symptoms, such as pain in the Axilla, and the accession of Fever, that a decisive opinion can be formed; I could wish that you would transmit inoculated children to neighbouring Stations with a view to extend the Sphere of experiment and observation, by which means, with your own exertions, a mass of evidence may soon be collected to establish the characteristics of the disease previous to its general diffusion; it will consequently be of the utmost importance to ascertain if your vaccinated Patients resist variolous infection afterwards, in every shape.

JAMES ANDERSON, P. G.

Fort St. George, Oct. 12th 1802.

Mr. DAVID WHITE, Surgeon at Angarypar, to Doctor JAMES ANDERSON, P. G. Madras.

I lose no time in informing you that by the arrival of my Assistant, Mr. Gourlay, from Bombay, we have now obtained the Cow-pox matter in the purest state, and in an increasing ratio,—which promises a future inexhaustible fund: and which I will endeavour with all diligence to propagate and transmit, from this place and Paulgautcherry—(the sphere of my medical duties)—in every direction—As a nicer operation is required, it is some time since I have begun to instruct and practice my Native Assistant in the best approved mode of puncturing or rather insition—Leaving my Assistant in charge here, I propose immediately visiting Paulgaut—and after laying a certain foundation there for further supply, I shall procure some poor patients, or whole families with the disease in activity upon them—to migrate towards Tric inopoly—Madura or other populous cities, whither I shall learn that the Cow-pox has not reached, or where it may have become extinct—I shall keep an exact record of all facts, consequential in their nature—whether occurring singly, or in a series—Tho' the simplicity of the subject would appear to elude all theory—the scanty assemblage of morbid symptoms, the absence of much pain, and the trivial degree of fever scarcely amounting to the idea of disease still there is no saying to what conclusions a multiplicity of varied experiments might lead us, and tho' the field hath been most industriously explored in Europe—the great difference of a tropical temperature acting on a new contagion may afford results that no reasoning a priori could have anticipated—I will communicate to you and the superintending Surgeon in Malabar the progress and propagation of the disease under me and my Assistant, and should I be lucky enough to form a collection of facts involving general principles—I will digest these into a more regular report or pathological account, and to encrease the speedy influx of more information—and stimulate extensive discussion—I will publish duplicates in the Latin language—a medium well calculated for scientific subjects, and more likely to attract the attention of learned foreigners residing among us, or practising the healing art in the vicinity of the British dominions in Asia—If I shall merit your approbation, and that of the Medical Board in the execution of what I now propose, I shall conceive myself amply rewarded for the labour expended—

———— ——— in tenui labor,
At tenuis non gloria!

The sanction of Government by directly appointing me to the management of this business, would smooth many difficulties, and add a weight to my powers of persuasion, which they alone can never command, for the Malabar Natives are still more prejudiced against the practice of inoculation than their more polished neighbours—Perhaps Government might perceive some recommendation in me having been the first person who introduced inoculation upon a large scale into this country—having during the months of December, January, and February last, inoculated upwards of 400 persons.—The stations of Paulgaut and Angarypar not only lie centrically, relative to the other portions of Malabar—but are especially convenient for keeping up the communication thro' the pass of Paulgaut between the Eastern and Western regions of the Peninsula.

I have nothing left to add, except that should you and the Board bestow a favorable regard on what is above proposed, no exertion of mine shall be wanting to promote both the scientific and practical purposes of the Scheme.

DAVID WHITE, Surgeon.
Angarypar, October 7, 1802.

Doctor ANDERSON's Answer.

I am favoured with your Letter of the 7th instant, and after the uniform failure of Cow-pox matter sent here on threads; having just witnessed the want of activity in matter taken from the arm of a Child, which I can only impute to its being so late as the tenth day; it gives me infinite pleasure to see your abilities seriously engaged in this pursuit of humanity.

The most flattering circumstance in my endeavours for the inoculation here is, that although the matter taken from the Chingleput girl Mariama's arm on the 10th day has failed with the human subjects on whom it was applied at Madras, yet the Cow inoculated with the matter from the same source as mentioned in my letter to Mr. Prichard is evidently affected; as yesterday several pustules appeared upon the Udder and one upon the Teats, all of which this morning are encreased in size, and have a dark speck on the Apex.

The Cow being affected with matter taken from a genuine vesicle on the eleventh day, which failed on Human subjects inoculated on the tenth; is accounted for by the failure of variolous matter on Cows at Lord Clive's garden, where it has lately been repeatedly tried by his Lordship's desire in hopes of producing a mild disease, and serves to show, that the Cow-pox is more capable of affecting that Animal, while the variolous is confined to mankind.

The Gentlemen at Bombay have great merit in establishing, preserving, and extending the disease in so encreasing a ratio; as notwithstanding the speedy accession of fever in some cases, all are satisfied from the marks and characters of the vesicle that it is the genuine which has now reached to Chingleput, of which the infection of the Cow is a powerful evidence.

As experience here however has demonstrated the success of this inoculation to be very uncertain, and Doctor Jenner's latest instructions admit the vaccine fluid to be liable from causes apparently trifling to undergo a decomposition; it is certainly advisable to keep its proximate source in view: Mr. Aikin and indeed some other writers suppose, that there never will be any occasion to look back to the Cow for a renewal of this Fomes, but I should be glad to be informed after all have been inoculated; how the Cow-Pox virus can be certainly preserved in a a state of activity only for a fort-night. I have therefore requested gentlemen stationed in the country, to institute enquiries amongst persons in the immediate care and management of Milch Cows, regarding pustular appearances or sores on the Udder or Teats, and rely on your best endeavours to inoculate them as well as children with the matter from Bombay, to ensure its preservation for general use, which will likewise contribute to a rational Phisiology.

I am well aware that the influence of the Missionaries of our charitable religion, has contributed to the diffusion of variolous inoculation, and no doubt Latin translations of such compendious works as that of Mr. Aikin on Cow-Pox, the Manchester Advertisement, published on Ceylon, and Doctor Jenner's latest instructions, to enable them to form adequate notions of the value of this practice, might be productive of facilitating its introduction, and as your Botanical and Mineralogical excursions have illustrated some of those valuable subjects, I am well persuaded that the digest you propose may remove any remaining objections to Cow-pox inoculation even among infidels; but your division of the country, after suffering the painful rites of Islam so recently as the time when Tippoo lay before the Travancore

ftiges; may prevent for a time the adoption of any novelty however beneficial, and disappoint your well intended zeal.

The Medical Board how solicitous soever to bring authority in view, are principally desirous of proving the disease now amongst us with Small Pox, and Government having given attention to Small Pox inoculation, there can be no doubt as soon as this is effected, will use their best endeavours to persuade every Parent and Guardian, of the advantage to the rising generation, until Cow Pox inoculation becomes as much an object of their care, as the giving every Child a proper name.

JAMES ANDERSON,
PHYSICIAN GENERAL.

Fort St. George, 16th Oct. 1802.

Mr. W. PRICHARD, Surgeon at Chinglepot, to JAMES ANDERSON, Esq. P. G Madras.

I was much gratified by the receipt of your letter, and have now the pleasure of informing you, that the two children I inoculated with matter taken from Mariamma's arm, are evidently affected, one being an European child, I can more accurately observe the progress of the vesicle, than on the Native child, and find it corresponds exactly with the description and Plate given of the vesicle by Mr. Aikin, Surgeon, which leaves no doubt in my mind of its being the genuine Cow Pox— The Native Child who is two years old, had a considerable degree of Fever twenty eight hours after inoculation attended with Nausea, which continued at intervals until the fourth day.

I am on the point of removing to Trippasore, where I shall continue my exertions, and hope with the assistance of the Collector and my Commanding Officer, to make this important disease general in that part of the Country.

W. PRICHARD.

Chinglepot, Oct. 13, 1802.

Mr. ANDREW BERRY, Superintending Surgeon, to Doctor JAMES ANDERSON, P. G. Madras.

I arrived here this morning and was glad to find that the sickness and mortality that raged the beginning of the hot season had subsided, there being few Fevers here now.

It will please you to learn that Mr. Hay has succeeded with the vaccine inoculation at Errode, only a few miles from this across the Cavery:—I inoculated one Child with infected thread he sent Mr. Smith, the Assistant Surgeon, who inoculated seven more.

I have requested Mr. Hay in case there should be any failure, to send across the river, an inoculated Child, that it may be begun in the populous village of Salem about twenty five miles from this place, and I will speak to the Collector Mr. Cockburn to-morrow to see what arrangement can be made to make it general among them.

Mr. Smith is also to inoculate a Cow this evening that the Natives here may have less objection, and the same may be adopted at Salem, he may perhaps be spared a day or two, to shew how the disease is given and its character, but being the only Medical man here, he can-

not be long spared; he has the different publications on the subject, and can explain to the Natives its wonderful advantages, I received at Ryacottah the Copy of your Publication.

ANDREW BERRY, S. S.
Sunkledroog, 12th Oct. 1802.

Mr. ANDREW BERRY, Superintending Surgeon, to Doctor JAMES ANDERSON, P. G. Madras.

I have just had a conversation with Mr. Cockburn, the Collector who thinks there will be no difficulty in introducing the vaccine inoculation generally in the Baramahl, by getting some of the principal Bramins or inhabitants of the Villages to set the example of having their children inoculated, the inhabitants of Malabar have readily adopted it, and as soon as Mr. Smith, has succeeded, or that Mr. Hay can send across the Cavery an inoculated Child, Mr. Cockburn will have the inoculation begun; and his influence I have little doubt will soon effect it generally; he means to publish among them, the account of its being so harmless at the same time so effectual a prevention of the Small Pox, that have appeared in the Government Gazette, and Mr. Carpenter the Commercial Resident, will also add his influence to its introduction among the weaving Families, and it will be a great object if this can be so diffused as to prevent the appearance of Small Pox in December or January, its usual period of appearing at Salem; where from the great population, Mr. Carpenter, has frequently known considerable mortality.

Mr. Smith, will come here to inoculate and perhaps occasionally to see the progress of the inoculated vesicles, but his duty at Sunkledroog will not permit his bestowing the time that the population of Salem would require, and indeed from the number of Civil Servants that will be stationed at Salem, with this further object in view, an Assistant Surgeon might be stationed here with great public advantage.

I wrote you yesterday from Sunkledroog what had been done there, so that I have little further to add on this subject at present, I expect to be at Cuddalore on the 18th, from whence I will write you again. I was yesterday on the top of Sunkledroog rock, and saw the most unequivocal appearance of liquid lava having run down the side of the rock; no other means could have produced so uniform an appearance; there are however no scoriæ or Pumice.

ANDREW BERRY, S. S.
Salem, Oct. 28, 1802.

Mr. JOHN ABERCROMBIE, Surgeon 19th Dragoons, to Doctor JAMES ANDERSON, P. G. Madras.

On the 27th ultimo I received a letter from Dr. Berry enclosing me a packet of vaccine matter; with which I the day following inoculated six half cast children, in four of whom a disease has been produced resembling with very trifling exceptions, the cow-pox I have seen in Europe. I have also inoculated several patients from the children in whom the disease was first produced, and have in no instance failed in producing it a second time.

As I am however anxious to put the matter beyond doubt by inoculation with small-pox infection which I cannot procure in this neighbourhood: may I request you will have the goodness, should there be any at the Presidency, to send me a packet of variolous matter.

My experience at home in vaccine inoculation was not very extensive, but was sufficient fully to convince me of the existence of a Spurious Cow-Pox, and the bare possibility

of the disease we now have here being of such a nature, will I trust be deemed a sufficient reason, for stopping short and proving, before we proceed any farther what has been already done. When I have had an opportunity of doing so, I shall give you a more particular account of my progress in the vaccine inoculation, and of the trifling exceptions above mentioned.

J. ABERCROMBIE,
Surgeon 19th Diagoons.

Doctor ANDERSON's Answer.

I am favored with your Letter of the 12th instant, and enter cordially into the notion of proving our new disease by the test of Small Pox, and will lose no time in supplying the matter you require, but to stop the progress of Cow Pox on bare possibility, seems to be a matter of more consideration, as Mr. Kennedy at Hydrabad finds that the matter applied only on a Lancet is not productive of the Protean fever which caused so much alarm, and therefore he supposes with apparent reason, that it may have been owing to the redundant quantity of virus contained in the threads which had been used in these cases, Mr. Kennedy likewise states, that vaccine matter forwarded by him on the 31st of August arrived at Vizagapatam on the 15th ultimo in an active state, which will soon find its way to Bengal as well as be diffused over the Circars; with every approval however of caution, that we may never be obliged to make an ungraceful return to Small Pox inoculation. I am &c.

JAMES ANDERSON, P. G.
Fort St. George, Oct. 18th 1802.

Mr. R. B. PERRIN, Surgeon at Calicut, to Doctor JAMES ANDERSON, P. G. Madras.

It is with peculiar satisfaction I am enabled to announce to you the successful introduction of the Vaccine Variolæ, at this station, for which fortunate circumstance, we are indebted to the benevolent intentions of Mr. Gourlay, Assistant Surgeon Angerypar, who brought with him from Bombay, on his return to that place three persons under the influence of the disease, from these several were inoculated by that Gentleman and myself, Six of whom took the infection, and have gone through the different gradations to this day being the 12th from its insertion; with all the principal characteristicks demonstrated by Dr. Jenner and others acquainted with the disease, such as the redness on the 3d or 4th day, the gradual increase of the vesicle to the 12th or 14th, with the extensive inflamed Areola, pain in the Axilla, slight degree of fever, and now, some have a black crust on the top of the vesicle.

That this blessing might not be neglected. I collected as many subjects as possible for inoculation when the state of the vesicle would permit, the number to this day amounts to upwards of 70, and I am happy to add they are in as great a state of forwardness as the time will allow me to expect.

As a strong proof of the powers of the vaccine disease over the Small Pox, I shall detail two cases as they simply are—1st A Women on the 1st day of eruption of the Small Pox, was removed on the 5th October from a family where she was suckling an infant, to the lower apartments of a house, the upper part of which is appropriated for the reception of Small Pox prisoners from the provincial Jail—her own Child not having had the Small Pox was inoculated with the vac-

cine virus, and sent to the same room where also for two days remained a boy with the Confluent Small Pox —the Child has taken the vaccine infection and resisted the contagion of the other, in the upper part of the house are 22 prisoners with the natural Small Pox and inoculated. Round the punctured part there is a considerable inflammation and a beginning vesicle.

2d--Upwards of 99 people were inoculated in the jail for the Small-Pox during last month, in consequence of that disease having appeared among them, above seventy declared they had received the infection when children, and refused to be inoculated besides a great number who shewed plain marks of the disease, more than twenty-five of the seventy, have since taken the disease naturally with several deaths, and others daily fevering, I made another scrutiny among them, and collected the whole who I had reason to doubt, the number amounted to 24---many of them being unwell, and disposed to fever, my success with the Cow Pox led me directly to inoculate with that virus, on the 7th Oct. on the following morning three of those with the hottest skin shewed the small-pox, the punctures have since disappeared, on another the puncture has disappeared without any appearance of eruption, the remainder appear to have taken the disorder, the whole having a considerable redness in the punctures, and as yet no further eruption of the Small Pox.

I have now only to observe from the numbers apparently anxious to receive the infection, its diffusion will most probably soon become general, and I sincerely hope will shortly arrest the daily ravages of that most dreadful scourge to mankind the variola.

R. B. PERRIN,
Assistant Surgeon, 2d Bat. 5th Reg. Bombay N. I.
Calicut, 10th October, 1802.

Doctor ANDERSON's Answer.

" I am favored with your Letter of the 10th instant, and cannot sufficiently commend your attention to render the vaccinated subjects from Bombay of so much utility at your station, but as no accounts have reached me of any direct experiments being made at Bombay by variolous inoculation, to place the efficacy of this new Virus beyond all manner of doubt; I shall rely on your inoculating a considerable number of your vaccinated patients, with Small Pox, that in case it should unfortunately prove defective, no interruption may be caused by it to the progress you were making with variolous inoculation.

After the surmise of spurious disease at Hydrabad, you will not be surprised to learn that our Masulipatam Cow-pox has not been able to withstand variolous inoculation, and on every account, I beg your attention more to the proving of the disease, than to its extension; as it appears that the Gentlemen at Bombay have hitherto been unable to execute this necessary duty, having no Small Pox in that quarter.

I will only trouble your further with an account of the Cow inoculated at my garden on the 11th instant, the pustules of which being full of a pellucid fluid on the 17th, two children were inoculated, and two more on the following day, but on the 19th of the month, the pustules began to scab and are now hard crusts like black warts without any surrounding inflammation, or apparent disposition to ulcerate; the children who were inoculated from this cow, do not as yet discover any signs of infection.

JAMES ANDERSON,
PHYSICIAN GENERAL.
Fort St. George, 27th Oct. 1802.

Mr. STEWART, Surgeon at Nellore, to Doctor JAMES ANDERSON, P. G. Madras.

Some time since I had the pleasure of receiving a letter from Dr. Berry, acquainting me that it was your earnest wish to have a subject with the Cow-pox sent to the Presidency as soon as possible. I have much satisfaction in informing you that the vaccine disease has been produced here from virus sent by Dr. Harris, and that I have this day inoculated several Children. The pustule exhibited so strongly the characteristic of the variola vaccina both in its progress and appearance, that I can scarce doubt our being in possession of the genuine disease.

Will you do me the favour to inform me whether it would yet be desirable to have a vaccinated subject sent from hence to Madras? I put this question from having been assured by a Gentleman very lately from the Presidency that the Cow-pox had been produced there before he left it.

I have been favoured with the printed letters and shall have the pleasure soon of laying before you the history of my vaccine practice here.

A. STEWART.

Nellore, Oct. 14, 1802.

Doctor ANDERSON's Answer.

The delay in forwarding vaccine patients to Madras is of less importance, as there is great probability that we can be supplied from Trippasore a journey of only 26 miles, and the greatest object now being to determine the security or otherwise from small pox, by Cow-Pox inoculation in this climate, I inclose some variolous matter for your use in this view, the powers of which you may first ascertain by inoculating some persons who have never had either of the two diseases, and with matter from them inoculate your vaccinated patients.

J. ANDERSON.

Fort St. George, October 22, 1802.

Mr. S. MEEK, Surgeon at Cochin, to Doctor JAMES ANDERSON, P. G. Madras.

Having on the 1st instant received a supply of vaccine matter in plates of glass, on Ivory Lancet points, and on thread from Doctor Kier at Bombay, taken on the 8th day after inoculation, the matter being exactly eight days old when it reached me. I inoculated four children from each of the parcels of matter, and I feel peculiar satisfaction in communicating to you that, with eight of the twelve I have succeeded in the most satisfactory manner;—the disease in all run its course in the usual way nor was the attendant fever of such moment as to occasion the smallest uneasiness or inconvenience to either the Parents or Children; each puncture was followed by a single pustule nor was more to be perceived either in the arms or body.

Those inoculated from the matter in the glass have all succeeded, but two that were inoculated from the ivory lancents and an equal number from the thread have failed.

I have this day from the successful cases inoculated twenty more (of which number are three young ladies), I have sent by Tappal, matter to the Senior Surgeon at Palamcottah, &c. a supply to Mr. Robert-

ſon, Aſſiſtant Surgeon at Anjengo, ſo that there now remains but little doubt of this moſt important diſcovery and bleſſing being before long very generally diſſeminated throughout the Peninſula.

S. MEEK.

Cochin, 10th Oct. 1802.

Doctor ANDERSON's Anſwer.

The zeal and attention of all the gentlemen to introduce the vaccine diſeaſe is ſo conſpicuous, that I can only continue in admiration by your extenſive exertions, but having no ſufficient evidence of its power to reſiſt Small Pox, I encloſe ſome variolous matter, which I obſerve from Mr. Perrin's accounts you may likewiſe obtain from Calicut.

JAMES ANDERSON,
PHYSICIAN GENERAL.

FORT ST. GEORGE, *October* 27, 1802.

Mr. J. RICHARDSON, Superintending Surgeon at Trichinopoly, to Dr. J. ANDERSON, P. G. Madras.

The vaccine matter that was ſent to me by Mr. Spalding I received on the 25th ultimo, and without loſs of time I inoculated three Children; one of ſix months of age, on the 28th. ſhewed ſymptoms of Fever which continued thro' the night, and was very conſiderable all next day. On the 30th, it had conſiderably abated and in the courſe of that day diſappeared entirely. On the third day after inoculation a little pimple, (or rather ſcab) was rubb'd off and left a ſlight excoriation, it could not be called ulceration, I found it impoſſible to get any matter from this ſubject;—

On the 30th of the month a boy two years and a half old who had been inoculated on the ſame day was brought to me in the evening; the parents ſaid he had been hot and feveriſh about noon, when I ſaw him however I could diſcern no ſymptoms of fever but there was a ſcab of a conſiderable ſize at the place of inſertion; On its being brought to me next morning I punctured the edge of the ſcab, upon its being preſſed there iſſued a ſort of matter (not pellucid) but of a white colour and conſiderable conſiſtence ſo that it remained in a globular form; willing however to loſe no opportunity of communicating a diſeaſe that tended ſo much to the benefit of mankind, although the ſymptoms appeared ſo equivocal, I inoculated that day (the 1ſt inſtant) five Children in all of which it failed to produce even the appearance of diſeaſe; I am ſtill of opinion that the Child firſt mentioned had the true diſeaſe not only from the conſiderable degree of fever and appearance of the ſore but alſo from its not being perfectly healed at this time though nearly a month has elapſed.

Mr. Gordon to whom I ſhewed the Child and related its hiſtory is likewiſe of opinion that it has had the diſeaſe; this I ſhall put to the teſt by inoculating it with variolous matter.

Wiſhing to give every aſſiſtance in my power towards the introduction of a diſorder ſo mild in the room of one ſo generally fatal as the natural Small-Pox. I anxiouſly wait a freſh ſupply of the vaccine matter which I have reaſon to expect from Mr. James at Negapatam, Mr. White at Paulgautcherry, or from Mr. Carnie at Jaffnapatam; I had almoſt forgot to mention that I received ſome of the matter from the latter, with which I immediately inoculated two Children, in neither of whom it produced any effect, the matter was five days in arriving—willing to do as much good as poſſible, under exiſting circumſtances, the inoculation with the variolous matter is continued.

JAMES RICHARDSON.

TRICHINOPOLY, *28th Oct*, 1802.

Doctor ANDERSON's Anſwer.

By accounts which I have received from Cuddalore it appears that the Negapatam vaccine diſeaſe has been damaged by the application of Plaiſters over the veſicle, which has occaſioned this appearance of pus where lymph only ſhould be found, it might therefore be adviſable to get freſh matter ſeeing the vaccine virus is ſo liable to decompoſition that for all the caution we can uſe may prove inadequate to the eſtabliſhment of a diſeaſe capable of reſiſting the Small Pox; which is the only character that can at preſent much intereſt us.

Doctor Harris at Maſulipatam has juſt acquainted us that having inoculated twelve vaccinated patients with variolous matter, eight of them had apparent ſigns of having taken the ſmall pox on the 9th day after inoculation.

His letter arrived here on the 22d inſtant, but having heard nothing from him ſince, I ſhall be happy to find that he has been premature, at any rate however as you have variolous patients your time will be better employed in attending to them than to this new diſeaſe; until ſuch time as it is found to reſiſt variolous inoculation, and as you are ſo much nearer to theſe places than myſelf it would be well to ſend ſome variolous matter to Mr. White at Paulgautcherry, Mr. Boodle at Palamcottah, and Mr. Tait at Madura.

JAMES ANDERSON,
PHYSICIAN GENERAL.
Fort St. George, Oct. 27, 1802.

Mr. JOHN HAY Aſſiſtant Surgeon to Doctor JAMES ANDERSON, P. G. Madras.

Dr. Berry informed me that he had written you of the ſtate of the cow-pox here. As it will yield you ſatisfaction to know the progreſs made here in diſſeminating this happy preventive of the greateſt ſcourge of humanity. You may be aſſured I have pleaſure in reporting it.

A ſupply of threads having been ſent me on the 30th ultimo, which had been ſoaked in the fluid of the puſtule on the arm of a healthy child on the 8th day after inoculation, I loſt no time in making uſe of them and in an hour after their receipt inoculated Captain Crewe's three youngeſt children, and after them one native child—the diſeaſe appeared only in the latter, in a very favourable and mild way, this boy was only two years old, and never had the ſmall-pox. The veſicle, areola, and ſcabbing proceſs reſembled exactly that repreſented in Mr. Walker's engraving with this difference only, that the ſkin of my ſubject was of mahogany colour and his a fair European.

So well ſatisfied was I of the diſeaſe being genuine, that on the 8th day I inoculated a ſecond time Captain Crewe's child only of ten months old, four native children, and a woman (who never had the ſmall-pox,) the mother of one of the latter.

In all, the inſition I could perceive, had taken effect on the 3d day and the progreſs of the ſymptoms ſo entirely correſponded with the deſcriptions from home and the plates give us that it appears to me unneceſſary to go more into particulars at preſent.

From theſe laſt ſix ſubjects I have now communicated the diſeaſe to eighty-one children and ſhall not fail to report to you what obſervations I may make in the courſe of their diſeaſes.

The character and appearance of my cow-pox puſtule in every reſpect coincide with that of the genuine diſeaſe given us by Dr. Jenner and with the plate in Vol. 1. Md. and Phyſic Journal, p. 120. given by the Engraver, ſhewing the progreſs of the puſtule on the arm of

his own child, excepting that no vesicle whatever has appeared in any one case unless where the lancet introduced virus, and that the scabbing process is sooner perfected.

Only three of the persons inoculated by me have been sensible of any disorder of constitution and in none of them has it occasioned a disease requiring any medical relief whatever nor scarcely such as to render a change of diet necessary, the three who were indisposed say they had slight fever, and this happening in the night. I did not see it in any of them.

The only symptom common to all of them, besides the pustule, is a slight affection of the axillary glands, no symptomatic fever has shewn itself, n r has the general constitution been eff cted in any way. The spreading red areola around the vesicle has been more extensive than in the inoculated small-pox, but except when touched it has given little pain, and has always soon disappeared.

From the disease being so very mild here, I am of opinion that the subject from whom Mr. Carnie supplied me with matter most probably had the disease in the most favourable manner, and that too much attention cannot be paid to the choosing only such subjects from whom matter is to be taken as have the vaccine in the mildest possible manner, Drs. Woodville's and Pearson's "Reports of inoculation for the Cow-pox," shew in the strongest light of how great importance to the public it is, that matter for communicating the infection be taken only from such persons as have the disease in the most mild way.

A great part of my success in having so many subjects willing to receive a new disease I owe to the humanity and assistance of Major Macleod, principal collector in these districts, who assembled an immense concourse of people at Bhevan-Coral, of all casts, and explained particularly the peculiar advantages of the general introduction of Cow-Pox, well assured from their experience of his kindness and attention to them in every instance that he would advise them to nothing hurtful to them or wrong in itself, fifty one children, on the same morning were brought to receive the disease, of the e twelve were of Brahmin Parents.

On the 15th inst. Mr. King was here on his way to B llari, and asked me to inoculate his child which was done accordingly; I have written him to remark and report to you what he may observe in the course of the disease.

Supplies have b en sent from hence of matter to all the principal Stations where I supposed, the disease had not been produced, to some of them four or five different times. With earnest wish that this discovery may be as generally known and improved on as possible and the Small Pox soon known no more.

I am, &c.

JOHN HAY, Assi. Sur.

Errode, Oct. 19, 1802.

Doctor ANDERSON's Answer.

The zealous exertions made by you and Major Macleod would be very commendable were we certain that so mild a disease as you and many others have now stated the Cow-pox, lately arrived from Ceylon to be, would obviate Small Pox, but as the gentlemen at Columbo have only yet been able to produce the evidence of a Dutch gentleman at Jaffnapatam in support of its efficacy I enclose you some variolous matter for that purpose, that you may lose no time in bringing this necessary part of the subject to light.

Major Macleod's Bhevan Coral assembly furnishes a good example for promoting general inoculation.

JAMES ANDERSON.

Fort St. George, Oct. 27, 1802.

Mr. W. PRICHARD, Surgeon at Tripaſore, to Doctor JAMES ANDERSON, P. G. Madras.

The two children I mentioned in my laſt have gone through the different ſtages of the vaccine diſeaſe in the moſt regular and ſatisfactory manner, I inoculated from them two children of Capt. Bole's and I am happy to ſay that they are both affected, I alſo inoculated one European and two Native children, with the latter it has failed, which probably was owing to my omitting a bandage, which I did, in order to aſcertain, whether a bandage is neceſſary, I have now reaſon to think it ought to be applied.

In my way to this place I was met on the 16th at Palore by Mr. Chriſty and Mr. Andrew who inoculated three European Children (which they brought from Walajabad) with fluid taken from the arm of a Child I took with me for that purpoſe.

I find ſome difficulty in procuring patients, however I hope when the diſeaſe is better known in this neighbourhood, the natives will more readily conſent to vaccine inoculation, for which purpoſe I mean to attend two mornings in the week at the populous village of Trivillore; with much perſuation and trifling reward, I prevailed on the parents of five children to allow me to inoculate them this morning, I have alſo inoculated a cow, hoping by this means to induce the Bramins who are very numerous here, whoſe veneration for that animal is well known, to countenance me in propagating the diſeaſe from this to them unexceptionable ſource.

Not being able to procure variolous matter here may I requeſt you will be ſo good to favor me with ſome, that I may try whether it will have any effect on Marriamma the child I ſent to you.

W. PRICHARD,

Tripaſſore, 25th Oct. 1802.

Mr. JOHN CARNIE, Surgeon at Jaffnapatam, to Doctor JAMES ANDERSON, P. G. Madras.

I am exceedingly happy to find you have at laſt got the vaccine diſeaſe at the Preſidency where I intended to have ſent a Child, had not the receipt of the Government Gazette announced Mr. Prichard's ſucceſs.

You will be happy to hear that ſix of the Perſons who had gone thro' the Cow pox at this place have been inoculated with active matter from different Small pox Patients, and that all of them reſiſted its action upon the ſyſtem ——I therefore think I may now venture to pronounce with certainty that we have got upon the Iſland, that genuine mild diſeaſe, for the introduction of which the world are ſo much indebted to Dr. Jenner.

JOHN CARNIE.

Jaffnapatam, October 20, 1802.

Mr. MATTHEW CHRISTY, Surgeon at Wallajabad, to Doctor JAMES ANDERSON, P. G. Madras.

I am favored by Mr. Prichard with an opportunity of taking vaccine fluid, on the 8th day of the diſeaſe; with this, three European Children were inoculated on the 16th inſtant: In all of them a circular puſtule was obſerved to be forming about the third day, which gradually encreaſed in extent, and preſerved in its various

ſtages, the elevated turgid edges and depreſſed ſurface, which characterize the Cow Pox.

In two of the three caſes there was a ſlight Fever, on the ſeventh day, from inoculation, and this took place on the eight day with the third Child, in whom the conſtitutional action, as well as local affection have been more ſevere.

In all however, there has been much leſs Erythema ſurrounding the puſtule, then accompanies this diſeaſe in Europe, and which if it does not merely depend on the degree of phlogiſtic Diatheſis, perhaps proves that the diſeaſe is degenerating; an accident which the inoculation you have lately had performed on the Cow, may prevent or repair, and the diſeaſe produced by fluid taken anew from the quadruped, may have more activity, and ſhow the uſual local inflammatory ſymptom---we have not yet inoculated any of theſe Children with variolous matter in order to prove the preventive action.

Fifteen more Europeans, and five Natives were inoculated on the eighth and ninth day of the diſeaſe; the latter agreeably to your former directions, can be ſent to any neighbouring ſtations where neceſſary.

MATTHEW CHRISTY.

Wallajabad, Oct. 25, 1802.

Doctor ANDERSON's *Anſwer.*

Your letter of the 25th is a clear proof that we are poſſeſſed of the vaccine diſeaſe in the ſame degree of activity, as that on Ceylon; and you will be pleaſed to learn, that by a letter from Mr. Carnie at Jaffnapatam of the 20th inſtant, ſix vaccinated patients had been inoculated from different variolous ſubjects without effect, on which I am only ſorry to remark, his omiſſion to point out the date of the ſmall pox inoculation.

As you muſt have ſeen the vaccine diſeaſe in England, and conſidering the rank and dignity in which you juſtly hold your profeſſion, I have great reliance on your opinion, and cannot think of removing any of your patients from your immediate notice, where in a European Regiment ſo much advantage to our knowledge may attend obſervations on the areola.

You will excuſe the introduction here of the ſubſtance of a late converſation with your old patient Mrs. Mappen, on the great benefit of cow-pox inoculation, who gravely replied, that no benefit was equal to the reſtoration of ſight to the blind.

She now reads for her amuſement; both cataracts remaining fixed, below the verge of the pupils.

JAMES ANDERSON.

Fort St. George, Oct. 29, 1802.

Mr. MATTHEW CHRISTY, *Surgeon at Wallajabad, to Doctor* JAMES ANDERSON, *P. G. Madras.*

I informed you that the children inoculated on the 16th had undergone a diſeaſe which exhibited every characteriſtic ſymptom of cow-pox, and ſeemed only deficient in the ſmaller extent, to which the local inflammation proceeded; I have to obſerve farther, that the veſicle never contained purulent matter; but its fluid was abſorbed about the tenth day---it has now the uſual appearance of a hard brown ſcab.

If you will favor me with variolous matter, they can be now inoculated, in order to prove the ſecurity againſt the ſmall-pox.

I can perceive that the infection

has taken in most of the twenty children inoculated on the 24th and 25th, and as it does not appear the disease has succeeded at Madras, I take the opportunity of Mr. Campbell to send you one of these children, from whom fluid for inoculation may be obtained in three days more; I have no doubt, you will pronounce it the genuine disease.

Mr. Andrew has written to Mr. Hepburn the Collector at Conjiveram, requesting his assistance towards introducing this Disease amongst the Natives at that place; and I have prevailed on an intelligent Bramin to translate into the Tamul Language, a summary of the advantages attending Vaccine inoculation, which can be distributed among the heads of the Village.

MATTHEW CHRISTY.
Wallajabad, Oct. 28, 1802.

Doctor ANDERSON's Answer.

The Bramins being the most intelligent, are on that account likely to be the most forward to promote attention to this new disease; and I will thank you for a copy of the summary you mention both English and Tamul; which altho' Madras may not be in possession of Types to render it immediately of general use, may perhaps be printed at Columbo, where the Dutch had established elegant Tamul Types, impressions of which I have seen, which may now be of great utility.

The Brahmins likewise being principal agents in the Drama of popular religion, are the most capable of expounding to the general satisfaction of the country, how the Deities whom they hold up for adoration; such as Patragali the Daughter of Sive may be influenced to permit a new Dispensation, themselves initiated in the omnipotence and universality of the first cause, and on that account more capable of instruction, than the exotericks, who have a thousand stumbling blocks laid in their way, as a barrier to Mythological record.

Mary M'Leary the Child you sent by Mr. Campbell, arrived here on the 29th ultimo, the fifth day of inoculation; regarding whom nothing could be observed, but a red speck at the place of incision; and Mr. Campbell who had brought her all the way in his Palinquin, being confident it was the disease, promised to bring her back in two days, but having himself called here this morning without her, I am sorry to acquaint you that he tells me the red speck has disappeared without any succeeding symptoms; the Child I understand is a candidate for the Female Asylum and I trust that her coming so far on such an errand, will prove an additional recommendation to the Ladies Governesses, for her admission. Inclosed I send you some variolous matter as you desire, and in case you are careful to explain particularly that the reason you now inoculate with Small Pox is owing to the want of Proof, whether the former inoculation was a security against this Disease or not, as Cow Pox in this climate is yet only under experiment, of which you can say nothing certain, until you have demonstrated to the general satisfaction that those who have had the Vaccine disease are not liable to be effected with Small Pox; the practice of inoculation for either of these Diseases will be attended with the good effects of familiarising the People to it: whereas the neglect of these precautions may produce distrust, and a belief of imposition.

J. ANDERSON.
MADRAS, *Nov.* 1, 1802.

Mr. A. L. SMITH, Assistant Surgeon at Sankrydroog, to Mr. A. BERRY, Superintending Surgeon.

I am sorry to inform you that the progress of vaccine inoculation has been but slow at this place.

On 3 out of the 8 inoculated on the 12th inst. the day of your being here, the disease was not produced, but on the remaining 5 it has effectually succeeded, and on them the symptoms have been completely descriptive of the true cow-pox.

On the 3d day from inoculation there was inflamation and elevation of the part punctured—on the 4th the vesicle was apparent, which gradually increased till the 9th or 10th in a circular form, dimpling in the middle, on which place a blackish crust appeared on the 11th, and on the 13th and 14th a scab was formed over the whole.

In only two of these children has fever been perceptible, and in them it first appeared in the one, on the 8th day; and in the other on the 9th day from inoculation, but it was slight in both, and of short continuance, the others however complained of pain in the axilla, on all the areola or inflamation around the vesicle has been well marked, and on the two affected with fever it was so extensive; attended with swelling and hardness, as to call for Saturnine applications to which it soon yielded.

On the 16th instant I inoculated four more children with recent matter which Mr. Hay was so good as send me, on all of whom the disease has taken place in a mild form.

On the 24th instant, from their vesicles I again inoculated the 3 children on whom it failed before, and one native child whose arms I to day examined, and there is every appearance of its taking effect.

These are all to whom I have imparted the disease (excepting two inoculated this morning belonging to a sepoy) and are all children of the europeans attached to the garrison.

I have made every endeavour to propagate it among the natives but unsuccessfully. As the hamildar of this place who was applied to, both when you were here and since, has refused to engage in this business without the sanction of Mr. Cockburn the collector, to procure which induced me to write the letter of which the enclosed is a copy, but I have not yet been favoured with an answer, and until it arrives, I have no hopes of procuring any other subjects except from amongst the children of sepoys, two of whom I this morning inoculated, and hope to repeat the operation on some more to-morrow, so then there will be no danger of a want of such matter in case of a general adoption of it by the natives.

I inoculated a cow on the 16th with the fresh matter sent by Mr. Hay, it proved effective but slightly, only one pustule having arisen and which did not present any livid appearance, which is the distinguishing mark of the true disease in the cow, a scab quickly formed on it and it is now nearly healed.

I intended to renew the disease with recent matter in a day or two.

I have since receiving a printed copy of your letters to Dr. Anderson on the state of the cow-pox inoculated at this place—been informed by Mr. Hay, that Mr. Cockburn and he, had made arangements previous to your arrival here---about his going to introduce that beneficial practice at Salem---and that it had been fixed that Mr. Hay should be there on the 23d instant for that purpose, but business having intervened, his visit is now postponed till the 2d of November.

As the state of sick of this station at present would but ill admit of my being absent for such a length of time, as would be required to introduce the cow-pox in such a populous town as Salem, I am extremely happy that Mr. Hay has made the above arangements with the collec-

tor, as he can easily be seperated from his station having few sick, and at any rate for a longer time than I could---consequently will be able to make a more extensive propagation of the disease.

A. L. SMITH.

Sankrydroog, Oct. 27, 1802.

Mr. A. L. SMITH, Assistant Surgeon at Sankrydroog, to DAVID COCKBURN, Esq. Collector at Salem.

As the beneficial practice of cow-pox inoculation at present much engages the attention of medical men. And as there is every probability that it will go a great way to prevent the ravages of the small pox if universally adopted. May I take the liberty of requesting that you will have the goodness to use your influence here in promoting it, as the hamildar to whom I applied to endeavour to persuade the natives to submission, has refused, without your sanction to engage in the business.

Upon this account I have not been able to extend it beyond those immediately attached to the garrison, which I wish much to do, as I am at present furnished with a considerable supply of matter from those before subjected to the disease.

Dr. Berry having informed me from Salem that it was your intention to enter upon a general inoculation there as soon as it had taken effect here. I beg leave to inform you that it has done so in all who submitted to it excepting two, and that I shall be supplied with a sufficiency of matter from them, to introduce the practice at Salem---if agreeable to your wishes of promoting the extension of a disease so mild in its progress, and at the same time productive of the beneficial effect of rendering the human body insusceptible of the infection of that scourge of mankind, the small-pox.

A. L. SMITH,
ASSISTANT SURGEON,

Sankrydroog, Oct. 20, 1802.

Mr. JOHN HAY, Surgeon at Errode, to Doctor JAMES ANDERSON, P. G. Madras.

I have been favoured with your printed letters, no attention shall be wanting on my part to do all the good I can by making as general as possible wherever I may be stationed, the blessing of cow-pox. I wrote you officially on this subject on the 19th instant and I am sure you will be satisfied with what I then told, was done.

I had made arangements with the collector Mr. Cockburn to take subjects to Salem and inoculate from them as on yesterday. The business however of my station and compilation of journal prevents me now from doing so until the 2d November, which day I have fixed on to attend there. I sent some days ago an address setting forth the advantage of Cow-pox to Mr. Cockburn which he is to have translated into the country language, and circulated.

A meddling, and as usual talkative old woman has done me some mischief here by the quickness of foresight she possesses---and has been very busy telling the villagers about that this inoculation is to be a means of enslaving all such as submit to it ---for that some time hence they will all be known by the mark in the arm---which she terms the company's chop--- I expect to triumph over this mischievous cat.

I have now inoculated 176 and shall by the end of the present month have added considerably to the number--- in every instance the disease has run the most happy course.

I have written Mr. Smith to tell him the arangements I had made with Messrs. Cockburn and Carpenter; when the former was here on the 10th current I shewed him the disease and impressed strongly on his mind the benefit of early measures being taken to scatter it abroad. It is much more convenient for me who have hardly a man sick to quit my station for 36 hours, all the time that I should absent myself from it, than for him who has 150 sick in hospital.

My expectations of an abundant harvest of cow-pox are very sanguine.

JO N HAY.

Errode, Oct. 24, 1802.

T. CHRISTIE, Esq. Medical Superintendant General at Columbo, to the EDITOR of the CEYLON GAZETTE.

Finding that the experiment of inoculating with small pox matter, patients who have passed through the Cow-pox, has not yet been practised in other parts of India, I request you will state in your next Gazette, that the power of the Vaccine disease in preventing the small pox, has been put to this last test at Jaffnapatam, where two patients who had passed through the Cow-pox, were inoculated by Mr. Carnie with small-pox virus, without any effect being produced.

The patients alluded to, were the Children of Lieut. Thiel, an intelligent Dutch Officer, who with a zeal for the truth and an anxiety for the safety of his offspring, highly commendable, desired that they might be submitted to the experiment, in order that he might be perfectly secured against the effects of the small-pox, and that the vaccine disease had lost nothing of its specific qualities, in passing through such a variety of persons and climates.

I beg leave to mention this as an example worthy of imitation, and to state that all the Medical Gentlemen on this island, are ready to make the same conclusive experiment on any Patients who have passed through the cow-pox, being perfectly satisfied as to its safety.

T. CHRISTIE, Med. Sup. Gen.

Columbo, Oct. 10, 1802.

Mr. JOHN KING, Surgeon at Ryacottah, to Doctor JAMES ANDERSON, P. G. Madras.

Being fully convinced that you are at all times happy to receive any kind of information however trivial in its nature that may in the least tend to the general good of our fellow creatures, I beg leave to state the following instance of the salutary effects resulting from inoculation by making use of vaccine virus, and although like the widows mite thrown into the treasury; I trust that you will not deem it unworthy of your attention.

Passing through Errode on the 14th Instant in the way to my station at Ballary, I had the good fortune to be introduced by my friend Major Innes to Mr. Assistant Surgeon Hay, who was at that period busily employed in that mode of inoculation, and with uninterrupted success, not one individual to whom it had been communicated, either European or Native having failed in taking the infection.

I immediately availed myself of so favourable an opportunity of having my own child inoculated, with some Pus, or rather Lymph, taken from a large Pustule on the arm of Captain Crews daughter; which was performed by gently insinuating the point of an infected Lancet under the cuticle in both

arms, about four inches above the Cubit.

This circumſtance took place on the 16th in the morning, and I remained there until the 17th in the afternoon, when paſſing a branch of the Cavery, I went on to Sankerrydroog, where I halted three days, and with anxious expectation waited for the iſſue of the operation.

For the firſt three days there was not the leaſt viſible appearance, of local inflammation, although I continually examined the arms in the moſt minute manner with an excellent pocket lens, and on the 19th in the morning, my child began to be extremely froward, but the punctured part had not the leaſt appearance of ulceration but appeared like a flea bite.

At two o'clock P. M. an eryſepelatous eruption broke out on her breaſt and upper extremities eſpecially near the inoculated part: which alarmed me much, from a ſuppoſition, that ſhe had contracted the natural Small-pox on the road where it was prevalent in many villages betwixt Dindigul and Carrore; that they were a prelude to the confluent kind, and that they would turn out Petechial, the uſual harbinger of death in that dreadful diſeaſe.

I immediately gave her two grains of Calomel combined with an eight of a grain of Tartariſed Antimony, which by purging, diſcharged an immenſe quantity of vitiated Bile.

On the following morning the eruptions entirely vaniſhed, the puſtules appeared, by elevating the Skin, and began to enlarge very rapidly, until the tenth day, when they aſſumed a livid complexion in the center, with a high circular ridge, on the outſide of a deep red colour; this day the pain in the axilla commenced, but was of ſhort exiſtence, the next morning, the Puſtules were encircled by a large efflorescence about an inch in diameter of a florid hue, almoſt the colour of ſcarlet cloth; the grand criterion ſo accurately deſcribed by the ingenious Doctor Jenner, of the diſeaſe having entered the maſs of Blood—from this time the inflamation began to fall gradually, and I have the pleaſure to inform you that my little patient is quite well and her arms beginning to heal, without any external application of any deſcription.

We are at preſent in the hoſpitable manſion of Mr. Aſſiſtant Surgeon Tozer and I purpoſe ſetting off for Bangalore to-morrow—I am afraid you are tired with reading, or rather attempting to read this horrid ſcrawl, but I am ſo relaxed and weak from the effects of a late Hill fever, that I am ſcarce able to guide my pen, but am extremely happy to be ſufficiently recovered to aſſure you that I am. &c.

JOHN KING,
SURGEON.

Royacottah, 29th Oct. 1802.

Doctor ANDERSON's Anſwer.

Your letter of the 29th ultimo from Ryacottah, at the ſame time that it ſerves to ſhew the ſimilarity of vaccine diſeaſe now introduced, to that deſcribed in England; will prove uſeful in guarding practitioners againſt the total neglect of Medicine in this climate where children of Europeans ſuffer more from Sordes in the Primæ Viæ, than from all other diſeaſes whatever.

How far the efflorescence you notice to have appeared in the afternoon of the fourth day may depend on Cow-pox, as the chief appearance near the part inoculated ſeems to indicate, the preſence of ſo much vitiated Bile in the firſt paſſ ges leaves doubtful.

Permit me to congratulate you on the happy concluſion of the vaccination of your daughter, which as ſoon as we can prove by experience and local obſervation that it has not degenerated in the paſſage from Eu-

rope as this case gives reason to suppose; will serve as a great encouragement to parents to avail themselves of this inestimable discovery.

The Small-pox which you encountered betwixt Dindigul and Carroor, will furnish Mr. Hay with fresh variolous matter to inoculate such of his numerous vaccinated Patients, as may chuse this proof, for entire satisfaction.

JAMES ANDERSON,
PHYSICIAN GENERAL.
Fort St. George, 5th Nov. 1802.

Mr. HENRY ROBERTSON, Surgeon at Quilon, to Doctor JAMES ANDERSON, P. G. Madras.

Impressed with an idea from the solicitude which you have so conspicuously and so laudably displayed for the propagation of the vaccine disease, over the Peninsula of India, that any report of its success will be acceptable to you, I take the liberty of transmitting you the following.

I arrived here upon the morning of the 16th Instant, on my way to the residency of Anjengo and having provided myself with the vaccine matter at Cochin from one of the many Patients inoculated successfully there by my Friend Dr. Meek I lost no time in communicating the infection to six; and on the following morning (17th) to five more Patients, on whom my stock of virus was expended.

The symptoms in eight of the patients have been perfectly characteristic of the disease, and the appearances, have corresponded exactly with Doctor Jenner's description--In two patients the effects of the virus were not preceptible until the morning of the 6th day, since which period the Pustules continue to exhibit the usual signs of those met with in the disease---I am unable at present to decide upon my success with the eleventh patient, an infant whom its mother had carried with her to some distance upon the fourth morning after inoculation, and has not yet returned to this place.

Those patients were inoculated in both arms, in one with matter preserved between two plates of glass, and in the other by the insertion of a portion of thread impregnated with it---No Fever was observed except in two of them, one an adult, who was somewhat feverish upon the evening of the fourth day, and the other a child who had some Itch upon its body, had slight fever for a few hours upon the fifth day: pain was occasioned by pressure in the axilla in most of them, and no Pustules appeared in any part of their bodies, except were the punctures were made.

A number more have been inoculated from those patients, and amongst them several of the Commercial Residents servants, by which means, I shall be enabled to extend this invaluable blessing to humanity over the settlement of Anjengo and the Travancore dominions adjoining to it.

HENRY ROBERTSON.
Quilon, 25th Oct. 1802.

Doctor ANDERSON's Answer.

Although acquainted by Mr. Meek of the supply of vaccine matter which you had received, I am not the less agreeably surprised by the distinct account with which you have followed it up, and being now possessed of what appears to be the genuine disease, will only point out to your attention, the additional satisfaction, now in your power, of remarks on its effects among variolous patients, in the manner of Mr. Perrin at Calicut; or the actual inoculation with small-pox matter, of those who have been vaccinated.

JAMES ANDERSON.
Fort St. George, Nov. 5, 1802.

Mr. MATTHEW CHRISTY, Surgeon at Wallajabad, to Doctor JAMES ANDERSON, P. G. Madras.

Enclosed is a copy of wha has been distributed among the Europeans here, and an accompanying Tammul translation by Aucherloo Braminy, late writer to Col. Dal'as—Through the influence of Mr. Hepburn we immediately expect an extensive inoculation at Conj v ram.

Fifty-six patients at this place have now the cow-pox upon them in its various stages; very few having experienced indisposition sufficient to occasion an hours confinement and when this has occurred, it h s always been on the seventh, eighth, or ninth day from inocul tion.

Seven children were yesterday inoculated with the variolo s matter you sen for that purpose—I have not a doubt of the result proving equally satisfactory as it has already done at Ceylon.

We have tried the ex eriment of inoculating persons who have previously undergon the small-pox and in them th e appear d a disposition in the punctured part to inflame, but which went off at the end of five or six d ys in a scab, without any previous v sicle, as thi h s been the result in the sister of the girl sent you on the 25th ult. it would seem they have previ usly undergone the small-pox which from the inattention of parents, has passed unobserved.

You will however b quite satisfied of the disease being ge uine, by looking at Dick Linton, sent on the 1st instant.

MATTHEW CHRISTY.
Wallajabad, Nov. 3, 1802.

Doctor ANDERSON's Answer.

Although I have no other doubt of the genuiness of the Ceylon matter, which you received from Mr. Prichard, than what appears from its production of the spurious disease in a Cow, which might be owing to its application so late as the 11th day, yet I am very much gratified by your ready use of the variolous matter which I sent you, and only wish that you could rather have procured a small pox patient to have inoculated from, th n to depend only upon the matter which I sent you, as it is the product of many repeated inoculations, whereby the disease appears to have become so mild as hardly to show any eruption or pustules requiring little or no medical treatment; so that Surgeons both on this and the Malabar Coast have reported thousands of small pox inoculations taking effect so happily, as to be unattended by a single casualty.

It may be supposed however that the variolous infection is in itself uniformly of the same nature and that the great difference in degree of disease between casual and inoculated small-pox, may be principally owing to the pati nts habit of body being always predisposed to receive the disease in casual cas s, whereas all persons who have never had the disease are promiscuously inoculated, and it may so happen tha not one of them is in a state of predisposition.

Let this be as it will, the matter which I sent you will go a great way to determine what dependance may be placed on he vaccine disease fr m Ceylon, and leave only the investigation of hat b oug t to th M l bar Coast by Mr. Gourl y, for our consideration; reports of which may be daily expected.

Were we ever so certainly in possession of genuine cow-pox, however, it appears from Dr. Jenner's latest instructions, so liable to decomposition; that I do not see how it can be satisfactorily practiced to any extent, without proving its power of resisting small-pox from time

to time, and in the present stage of the business, think it much better to preserve the disease which we have in an active state; by the inoculation in weekly succession of a few patients; than attempt to spread it over the country before that essential character is fully demonstrated.

I read your summary with a great deal of pleasure, as it corresponds in its principal features with the Manchester advertisement published on Ceylon, which *mutatis mutandis* will apply to all countries; can readily be translated into Tamul at Columbo, and I have no doubt, that Mr. Christie Superintending Surgeon there will spare no pains to effect so useful a purpose.—Auchrloo's translation was so much approved of by my servants, that I have directed them to issue copies of it to the neighbouring villages, as preparatory to a preventive of small-pox, as soon as we can make it appear equally efficacious here, as it has been in Europe.

The Bombay cow-pox by the way of Hydrabad having been supposed of a spurious nature, possessing less character of what is called the genuine disease, than that with which you are employed; gives little hopes of a better result from small-pox proof, than the trial at Masulipatam; where the small pox appeared with more alarming symptoms in all the vaccinated patients that were inoculated, than generally takes place in variolous inoculation; of which Dr. Harris has transmitted a particular account; and I have directed the Medical Board Secretary to send you a copy, as the most adequate information in my power in case of such an untoward accident, as small-pox appearing on your patients; which you would have had sooner, but for the delay occasioned by Dr. Harris's ill health; but I am happy to find, that no lives have been lost.

The boy Richard Linton arrived the 2d inst. in the evening and from him a child of Major Dighton's and an infant of Mr. Underwood's were immediately inoculated, the latter I understand has failed, but David Dighton's punctures have every appearance of the disease having taken effect, I looked at Richard Linton's arm, the night of his arrival when the vesicle appeared flat or rather hollow—the circumference of which was a narrow ring, being a conspicuous elevation of the cuticle, exactly resembling that of the former child Mariamma from Chinglepur, and I have no doubt will prove to be the true cow-pox, as both Mr. Rogers and you have supposed. This morning Mr. Campbell tells me that Mr. Dighton's arms have every appearance of those cases which he has seen on the fifth or sixth day.

JAMES ANDERSON.

Fort St. George, Nov. 8, 1802.

Mr. J. PRICE, Supertending Surgeon at Mangalore, to Doctor JAMES ANDERSON, P. G. Madras.

With much pleasure I now acknowledge the receipt of your letters on vaccine inoculation and have much satisfaction in acquainting you of our success in Canara.

Mr. Troy's arrived from Bombay early in last month, and brought some fresh matter, with which he inoculated Lieut. Marshall and two boys belonging to the Corps, stationed at Cundapore; they all had the disease favorably.

He has now upwards of one hundred patients in different stages of the disease, so that I have no doubt, but it will very soon be general, throughout this province.

I wrote off immediately to Bednore and informed Mr. Briggs of our success, and recommend him to send down half a dozen of his people to Cundapore to be inoculated, and as that Batalion is about leaving Bednore, I am in great hopes it

may be the means of carrying the cow-pox into Mysore.

J. PRICE
Mangalore, Nov. 1st 1802.

Mr. R. HOYLES, Surgeon at Cundapore, to Mr. JOHN PRICE, Surperintending Surgeon at Mangalore.

I had last night the pleasure of receiving your note, and am happy to inform you that the cow-pox has succeded extremely well in Cundapore. Lieut. Marshall and the two boys whom you saw when here, have for some time been quite recovered. From these three I inoculated about thirty more who have all also had the disease in the most favourable manner, and without any complaint except a slight pain and swelling in the axilla of the infected arm, about the 13th day the sore begins to dry up and soon after scales off.

As the natives are at present rather backward in coming foreward, I was afraid the virus would have been lost altogether; however those in the neighbourhood, who have witnessed the mildness of the disorder, now bring their children without any hesitation.

Mr. Read is using his utmost endeavours in persuading the people to inoculation, and I expect a great many patients from that quarter in a few days. He intends carrying the infection through the other parts of the district, by means of a native Doctor, who is just now under my tuition.

I have heard nothing from Mr. Briggs, at least nobody has yet arrived.—If the small pox is in Mangalore, you would oblige me very much by sending a few Lancets armed with the variolated matter, as I wish to repeat a few experiments and perhaps may never have such an opportunity.

It was my intention to have written you some time ago, but I have been lately a good deal indisposed with a bowel complaint; by which and the cow-pox together, I fear my journal will cut but a poor figure this month.

R. HOYLES.
Cundapore, Oct. 23d. 1802.

Doctor JAMES ANDERSON, P. G. Madras, to Mr. JOHN PRICE, Superintending Surgeon at Mangalore.

Your letter of the 1st instant, and its enclosure from Mr. Hoyes are very satisfactory; especially as he proposes putting the disease of which he is in possession, to the test of small pox, for which you can certainly obtain matter from Mr. Perrin at Calicut.

The sending vaccinated patients into Mysore by the battalion from Bednore was a good plan, but as the opportunity appears doubtful, it is of less consequence, since I have been acquainted by Mr. Hay at Trirode that the vaccine disease which has refilled the small Pox, is now established at Seringapatam and Ryacottah.

JAMES ANDERSON,
Fort St. George, Nov. 8, 1802.

Mr. ALEXANDER KENNEDY, Surgeon at Hydrabad, to Doctor JAMES ANDERSON, P. G. Madras.

I deferred replying to your last until I could ascertain whether the variolous matter which accompanied your letter, as well as some which I had received the evening before, from Doctor Harris, were in an

active ſtate; and I have now the pleaſure to inform you, that upon trial they both produced the diſeaſe, and that I have this morning been enabled to inoculate with freſh variolous matter five of the children, whom I had formerly vaccinated; three of whom are of the number mentioned in my letter to you of the 30th Auguſt as having had ſymptoms of fever on the night following their being inoculated. The ſpurious or genuine nature of the vaccine matter, we have been uſing here, will thus be ſoon aſcertained, and the reſult ſhall be faithfully communicated to you.

I am ſorry to ſay that the natives here, ſeem ſtill very little diſpoſed, to adopt this beneficial practice; I ſuſpect that they are ſtill diffident of the efficacy of a practice which appears ſo perfectly eaſy and ſimple, and that obſerving the ſafety of thoſe who have been vaccinated during our ſeaſon when the ſmall-pox ſhall happen to rage, is perhaps more likely to overcome their ſcruples, than all that can be ſaid to them upon the ſubject. In this point of view, what has been done, is ſtill likely I hope to be productive of much utility.

Colonel Stevenſon has been moſt zealous to give every poſſible publicity and ſupport, to this good cauſe, and with this view has had Governor North's Proclamation explanatory of its benefits, tranſlated into the Mooriſh, Gentoo, and Malabar languages, and affixed to the cutwall's choultery of the great bazar — copies of theſe have alſo been poſted up in the regimental bazars and barracks of each corps, as well as carefully explained to the fighting men, with an intimation that every medical gentleman in camp would chearfully inoculate all thoſe who ſhould apply.

As yet we have ſcarcely had time to know what effect this may produce, and I am willing to hope that it will not be entirely fruitleſs, but ſhould it fail, the influence of Government, or ſtill more certainly the change of opinion, which time cannot fail to produce, will no doubt ultimately remove all objections to the general adoption of this moſt invaluable diſcovery.

ALEX. KENNEDY.

Hydrabad,
Nov. 1, 1802.

Doctor ANDERSON's Anſwer.

As you muſt be acquainted by Doctor Harris of the failure of the matter which you ſent to Maſulipatam to reſiſt ſmall-pox, before this letter can reach you; I am extremely glad to ſee that you have already taken effectual means of knowing the value of the vaccine matter which you received from Bombay, as this will ſatisfy the natives that you are acting upon principle; and let the reſult be as it will; I have great reaſon to think that the diſeaſe by the way of Ceylon will prove genuine; having reſiſted ſmall-pox 9 days at Errode, and as it is now within our reach likewiſe on the Malabar Coaſt, imported direct from Bombay by actual patients, in caſe of proving any where or every where as I expect good; I ſhall take care that you are ſupplied if neceſſary, in due time.

JAMES ANDERSON.

Fort St. George, Nov. 8, 1802.

Mr. JOHN HAY, Aſſiſtant Surgeon at Errode, to Doctor JAMES ANDERSON, P. G. Madras.

I was favored with a copy of your reply to my Letter of the 19th ultimo, and an encloſure of variolous matter, by which you

desire me to prove my cow-pox a preventive of small pox, before disseminating it more widely.

It will be a satisfaction to know, that seven days previous to the receipt of your favour, I had put to the test, the powers of the vaccine in obviating the variolous disease in eight different subjects, by taking five of them to a house where were two children covered with natural small-pox.

There were they exposed to the infection, but to put beyond any doubt the preventive powers of the former, they were on the spot inoculated every one in both arms, from one of the children whose disease was least advanced, and in whom the matter had not yet become purulent, in the pustule.

I charged three lancets from the same subject, and on the same day inoculated three other children--- This is now the ninth day since; and in no one has the variolous infection shewn the smallest sign of producing the disease; which were it to have done, must have been manifest by this time; not one of the eight children on whom I made my experiment had had the small-pox.

This of itself is to me almost convincing, that in this climate even, the genuine cow-pox is equally powerful against small-pox, as in Europe: I have however since receiving your enclosure of variolous threads, inoculated from them four other vaccinated children, in no one of whom I have any doubt of its dying away, as in the other eight.

You shall have information in proper time, and I shall continue always to inoculate a proportion of the persons to whom I communicate the vaccine, with small-pox, as much to prove the disease as to satisfy the natives of the extensive and wonderful powers produced by it.

I had yesterday letters from Mr. Superintending Surgeon Anderson, and Mr. Tozer, of the disease having been produced at Seringapatam and Ryacotta, by vaccine matter sent from hence; and from Mr. Hurdis and Mr. Garrow, of its succeeding at Dindigul and Danaigun Cotta; so that in these parts it may soon be general might, I suggest however one great risk we shall incur I now would.

I allude to the propagation generally, of the vaccine to Native Doctors; we have seen that even with ourselves, many instances of spurious disease have happened, and the injury done to our great work therefrom has been incalculable; were then the vaccine committed to the hands of Natives, with many of whom the desire of lucre more than the benefit of mankind, has the first place; I much fear it would rarely prove to be the preservative we now have, and which by easy means we may keep pure and unmixed.---This plan I have followed strictly here, and have marked the good effects of it, the disease having appeared uniformly the same in all.

Nay I have ventured to do more, your approval of which I hope to have--- Messrs. Hurdis and Garrow had the disease produced at Dindigul and Danaigun Cotta (as I have already remarked) they were most zealous to communicate it to every one where it might have been useful - but I have entreated them earnestly not to proceed farther in it, on account that they had only Natives to inoculate it.

In this I think I have done right, but shall be happy to have your sentiments and instructions on the subject.

I shall in two days more send supplies of vaccinated threads to Dr. Berry, with which the disease may be produced at the Presidency in the same state as here, where I am confident it is proof against small-pox.

Subjoined I have the honor to annex a State of the inoculation of

cow-pox, for the month of October 1802.

Casts.	Men.	Wo-men.	Boys	Girls	Total
European,	0	0	2	3	5
Bramin,	0	1	7	3	11
Gentoo,	0	1	32	29	62
Malabar,	0	0	41	34	75
Canara,	0	2	39	40	81
Moor,	0	1	15	9	25
Pariah,	1	0	5	6	12
Total,	1	5	141	124	271

JOHN HAY.

Errode, Nov. 3, 1802.

Doctor ANDERSON's Answer.

Your letter of the 3d instant is indeed a great present, as it strengthens the account of the value of Ceylon cow-pox, which I had received from Mr. Carnie; and the observation you have made on the place of insition of small-pox is so far satisfactory, as it is well known that inflammation on the inoculated part, appears previous to the ninth day in variolous inoculation; and indeed your expression of *dying away*, looks as if there had been some on the eight patients whom you mention, nor must we be surprized at such an appearance on the introduction of this virus, as those who nurse and attend small pox children have frequently local pustules, unattended with fever or constitutional disease. I approve however of your continuing to inoculate variolous virus occasionally for your own satisfaction, as well as that of the natives.

You will excuse the transmission of Letters in copy, as I have thought it of consequence to distribute copies of all such as have appeared worthy of notice on this subject for general information, which hitherto has been attended with the best effects, and surely you who have successfully done so much, may expect every advice and information in my power; and no doubt were there men of adequate knowledge sufficient to inoculate all that require it, in this extensive country; it would be very proper to employ them in preference, in the management of a disease so capricious as this cow-pox is represented to be, even by its founder, who I believe is a very candid writer; but as we must take the world as we find it. I can only say that I see little difficulty or objection to your instructing an intelligent Native in the vaccine inoculation, to attend Mr. Hurdis, and another Mr. Garrow; and where no medicine is necessary there is no occasion for his being a Doctor; as his conduct, and the disease under his management may be looked into, from time to time by such professional men as may be most conveniently situated.

The Indians having domesticated the Elephant, can find no difficulty in comprehending all that is known of cow-pox; and being themselves the patients, will prove the best check against imposition; I will only observe farther, the notice of an old Lady mentioned in your former letter, as a caution against precipitation in this new business; as well to admit general satisfaction, as to give the villagers time to reflect on the extent of its value; and it is obvious that the execution of a matter of this nature can answer no good purpose, without the cordial concurrence of the sex.

You will be happy to hear that we have at last got the cow-pox established in Madras, in the person of David Dighton; and Mr.

Horſeman tells me that he has juſt received three children in the heigth of the diſeaſe, from Doctor Chriſty at Wallajahbad.

Earneſtly wiſhing every ſucceſs, and the continuance of health to enjoy well earn'd commendation. I am, &c. JAMES ANDERSON,

Fort St. George, Nov. 10, 1802.

Mr. JOHN ORR, Surgeon at Columbo, to Doctor JAMES ANDERSON, P. G. Madras.

I had the pleaſure to receive the paper, ſent me by your order, containing ſome intereſting correſpondence relative to the vaccine diſeaſe.

Notwithſtanding the ample diſcuſſion which the ſubject has already undergone in Europe, much careful enquiry and obſervation are ſtill neceſſary; and a due conſideration of the original importance of the diſcovery itſelf, and of the extenſive uſe to which it will ſoon be applied in India, calls for the exertions of every individual to preſerve the ſource of the diſeaſe pure and unpolluted, and to notice every deviation from that peculiarly mild character, under which alone it is effectual as a preventive of ſmall-pox.

The anomalous appearances recorded by Mr. Ure in his letter to Doctor Scott, were ſufficient to excite doubts of the real nature of the diſeaſe produced at Hydrabad. His preſent communication however, clears up the myſtery, and his obſervation of the diſtinct appearance of the original puſtule leaves no reaſon to doubt that the genuine diſeaſe was produced, and that the pimples alluded to, were nothing more than the effects of ſome irritating cauſe applied to a ſkin diſpoſed to inflammation.

Such a ſtate of ſkin is very common among children. In many caſes I have obſerved that a puncture made in the niceſt manner, has, in a few days, exhibited ſuch an appearance of common ulcerations as could not be miſtaken; while, in others the conſequence has been merely a boil containing puzulent matter, conſiderably raiſed above the ſurface and having alſo an inflamed circle round its baſis, but, in no other reſpect bearing the ſmalleſt reſemblance to the true vaccine puſtule.

The vaccine diſeaſe has been uſhered in to the notice of the world under the moſt engaging aſpect of mildneſs and ſimplicity, which contraſted with the malignant nature of ſmall-pox, has greatly contributed to its favorable reception. It is moſt true that, conſidered merely as a diſeaſe, it neither requires confinement nor medical attendance; but the practice of general inoculation, founded on this certainty, has already been the cauſe of ſeveral unfortunate accidents which might have ruined its fame for ever, had not the careful inveſtigation of ſome of the moſt eminent phyſicians in England detected the error and explained its true cauſe to the ſatiſfaction of the whole world. Mr. Ring, in his valuable compendium of vaccine information, relates ſeveral caſes in which the occurrence of ſmall-pox, after the patient had undergone the vaccine diſeaſe, occaſioned the greateſt alarms.

The moſt diligent inquiry was made into the particulars of theſe unfortunate caſes, and it was completely aſcertained that, in every inſtance, the cow-pox had exiſted only in a ſpurious form; that the matter uſed in the inoculation had been obtained from a doubtful ſource, and by a perſon not accuſtomed to the practice; or, that matter of a proper quality had failed, from accidental cauſes, in producing, in that particular inſtance, the genuine diſeaſe.

It is only from the occurrence of similar accidents that any obstacle can be expected to the progress of vaccination in India.

The natives from the experience of the fatal effects of small-pox, must be disposed to receive with thankfulness, a remedy which promises to them exemption in future from the attacks of that most dangerous and loathsome disease.---Their confidence will naturally encrease with their experience of its good effects; but, should one case of small-pox hereafter occur in the person of a native who, (having had the vaccine disease in an imperfect form) has been permitted to return to his home assured of safety; a prejudice against the new practice would instantly arise, which, all the exertions of its most strenuous advocates would never be able to overcome.

My own experience enables me to say, that instances of entire failure and of spurious disease will often be the consequence of inoculation, with virus even the most active.

The first will most generally happen in persons of advanced age, and the second in children, whose tender habits are seldom free from some degree of irritation, affecting either the system at large, or skin in particular.

In thirteen hundred and seventy persons of every age whom I have inoculated on both arms, I have found it necessary to repeat the operation in one hundred and eighty five, and in sixteen cases, a third inoculation has been required to produce the perfect appearance of the vaccine disease---if this statement shall be found to correspond with the experience of others, nothing further can be required to evince the necessity of the most careful observation on the part of the inoculator, before he attempts to warrant his patient's safety from the attack of small-pox.

Considering the frequency of that disease in the neighbourhood of Colombo, it is rather surprising that only two of our vaccine patients have, as yet suffered from its interference. The first case was a healthy robust man aged thirty two; he was inoculated on the 6th, had severe fever on the 7th and two succeeding days, and on the 10th the variolous eruption was evident all over the body. The vaccine pustule on each arm maintained its ground clear and distinct, until the 14th when it could no longer be distinguished from the mass of ulceration surrounding it. The man died four days thereafter. The other case was a young girl of fourteen, she was inoculated on the 12th, had the fever on the 14th and 15th, and a mild eruption on the next day. The vaccine pustule suffered no interruption from the others in their neighbourhood, and completed their course in the usual manner in 17 days; the girl recovered.

In both these cases, it was clearly ascertained that the patients had been exposed to variolous contagion, for several days before they were inoculated.

The vaccine disease, as it has appeared in Colombo, continues to preserve its character of mildness in every stage. The pustule has been uniform in its appearance, and the surrounding inflamation has been violent, only, in two or three cases in which the pustule had been frequently punctured, for the purpose of inoculation. The symptomatic fever has been so mild as frequently to escape observation, and the pain in the axillary glands has been a constant symptom, but never attended with much inconvenience.

I have, as yet, observed only one case of a secondary pustule, a boy of fourteen was inoculated on the 22d. On the third day, the puncture on each arm bore the usual appearance, and on the next a distinctly marked pustule was observed on the back part of the left thigh. This last has continued its course regularly, and and I intend proving the specific nature of its contents by inoculation.

JOHN ORR.

Columbo, Nov. 1, 1802.

Doctor ANDERSON's Answer.

In the infancy of an establishment of so grand a work, as the inoculation of cow-pox, every document is of value; but the remarks and observations of a person of extensive practice, is particularly desirable; which more and more confirms the similarity of occurrences with those observed in England. Seeing the chief character of value, the security against small-pox infection, is pretty well determined, as you will observe by the Government Gazette Supplement, the latest of which published yesterday I have the pleasure to enclose for your perusal.

As you justly observe; the greatest object is to have special care, that no assurance of safety against the small-pox is given, unless the character of the genuine vesicle appears, the Medical Board have recommended for the general introduction among the Natives of the country, that pandalls at all Government stations, and garrisons, be erected for them to assemble at, where a European Surgeon can attend for their inoculation; and it will be his principal duty, to see that the disease preserves its distinct character, and to impress on the minds of the people, the necessity of marking its progress; as on that, their safety from Small-pox depends.

In all doubtful cases the re-inoculation as you have practised is absolutely necessary, and matter from such a source should never be made use of.

That you should have been under the necessity of inoculating twice, and even three times before the disease took effect to your satisfaction, is no way surprising; as the Small-pox which is probably the most capable of affecting our bodies, sometimes requires repeated inoculation to produce the desired effect.

JAMES ANDERSON,
PHYSICIAN-GENERAL.
Fort St. George, 2d Nov. 1802.

Doctor JAMES ANDERSON, P. G. Madras, to Mr. JAMES RICHARDSON, Supertinding Surgeon at Trichinopoly.

The Cow-pox being now in the hands of the Surgeons at this Presidency, and great part of the children of European Families, as well as many of those of the Natives already inoculated; the risk of soon losing the Small-pox altogether is so obvious, that I must request you while yet in possession of it, to take such effectual means as I recommended for the preservation of active Small-pox virus in the Madras Gazette of the 14th Feb. 1801, by placing some previously dried in the shade, between two pieces of mirror glass, as an occasional resource of proof; in case the powers of the vaccine should again become doubtful.

It will be adviseable for you likewise, to procure some vaccine patients without delay, from Mr. Hay at Errode; or send a small detachment of people from Trichinopoly who have never had the Small-pox to be inoculated by him with the vaccine, and immediately thereafter returned to you; any expence attending the conveyance of children or otherwise may in the mean time be placed to my account as your station and abilities, renders Trichinopoly the most eligible center of distribution for all the Southern possessions.

JAMES ANDERSON,
PHYSICIAN GENERAL.
Fort St. George, 15th Nov. 1802.

Mr. DOUGAL CAMPBELL, to Doctor JAMES ANDERSON, P. G. Madras.

As it may be a satisfaction, to the parents of children now under inoculation for the cow-pox, to know the result of David Dighton's case which is the first that has succeeded at this place, as also a farther proof of the genuiness of the cow-pox at Wallajabad.

I am happy to inform you he has passed through a disease in every symptom strictly corresponding with what is described in the books from home; and what I myself have observed in England. There has been drawings of his arm taken on the eighth and twelfth day, exactly resembling these in the plate of Paytherus.--Twelve children have been inoculated, from him the most of whom have taken the disease: and as no accounts have come from Mr. Christy who inoculated a fortnight ago; we may safely conclude the Small Pox has taken no effect with his patients.

DOUGAL CAMPBELL.

Gardens, 15th Nov. 1802.

Mr. J. F. FRANK, Assistant Surgeon at Seringapatam, to Doctor JAMES ANDERSON, P. G. Madras.

I have lately been favored with some cow-pox matter from Mr. Hay at Errode preserved on thread in a quill carefully surrounded with sealing wax—a child was also sent to Mr. Wilson Garison Surgeon here and as he had no patients he requested me to take this advantage of propagating the vaccine disease, from this source on the 8th day from inoculation I have been enabled at three different times to inoculate nineteen, of whom two I believe have not succeeded, as their symptoms have been different and their pustules dried up sooner than expected—all the others had fever on the 4th, 5th, and 6th day after inoculation, and I observed the gradual rising of the Pustules, the surround-inflammation, in some to a considerable extent, the limpid matter and depressed surface &c. Among these the Lady de Meuron Bullot mother of several grown children, suffered greatly from the inflammation and swelling of the part inoculated.—I shall be very happy when the dreadful disease the small Pox is extirpated, as the following case occurred to the house keeper of the Senior Captain of the Meuron Regiment, a Ceylon woman 35 years old, and the mother of several Children; she was inoculated from the product of the Errode matter taken from a child one year old, together with her own children and those of her servants in all 8; the youngest child one year and oldest ten years of age, they all had the disease in the mildest manner, except the above mentioned woman, who on the third day after the vaccine fever had entirely ceased, was siezed with a violent fever attended with vomiting and delirium, when on the 10th day from vaccine inoculation the natural small-pox appeared in great numbers on the face, breast and hands—I reported this to the Superintending Surgeon and requested several Medical Gentleman to come and see her, who have done me the honor of doing so daily—this is now the 16th day from vaccine inoculation and no bad symptoms have appeared altho' the number of pustules are great. May not this woman have been infected before or during the progress of the vaccine disease, as behind the house where there is a Sepoy Barrack, several children have the na-

teral small-pox and I have seen the first symptoms appear the 12th day after small-pox inoculation.

What surprised me was, that the cow-pox maintained its character in every stage similar to the others viz. in pustule, inflammatory circle, and scab of mahogany colour.

J. F. FRANK,
ASSISTANT SURGEON,
REGIMENT DE MEURON.
Seringapatam, Nov. 8, 1802.

Doctor ANDERSON's Answer.

Your letter of the 8th inst. is so replete with matter on the interesting subject of vaccine inoculation, that I have perused it with much attention, and consider the two cases you mention of the pustules drying up suddenly to be one of the spurious kinds or anomalies, mentioned by Dr. Jenner as arising from causes apparently trifling, and of great importance to be noticed as showing that in seventeen cases out of nineteen the genuine disease was produced, but two were spurious from the same source, and accounts for the failure of the disease at Masulipatam where it appears by a drawing which arrived here, that a scab was formed on the fifth or sixth day after inoculation.

You have fully accounted for the two diseases existing together at the same time in the Ceylon woman, by the vaccine not having completed its course, before the system was charged with the variolous disease, several cases of which have occurred in England, showing that under such circumstances the cow-pox cannot arrest the progress of the small-pox, and that both perform together their regular courses.

JAMES ANDERSON.
Fort St. George, Nov. 16, 1802.

A CARD from Doctor JAMES ANDERSON, P. G. to the INHABITANTS of MADRAS.

DOCTOR ANDERSON takes this opportunity to acquaint the Public, that an Operator and Patients in the seventh, eighth, or ninth day, of the vaccine disease, will attend at the Silk Bungalo in his garden, to inoculate all persons who may apply to him for that purpose, betwixt the hours of nine and twelve forenoon, on Tuesdays and Saturdays; and in case they return on that day se'ennight, will be inoculated again if necessary, or furnished as success may appear to warrant, with a certificate in the following form:

"In security from small-pox, I hereby certify, after careful inspection and enquiry, that A. B. a child three months old, from the village of Nungumbakum has the genuine vaccine vesicle.

Witness my hand writing this 18th day of November, 1802."

JAMES ANDERSON.

Lord DERBY to Doctor DENMAN.

I have great pleasure in sending you as exact an account as I can give of a circumstance which occurred when my two children were inoculated for the cow-pox; and if you think the knowledge of it may prevent any dangerous consequences to others, you have my permission to make it public

April 30th.—the children, one of which was fourteen month and the other two month old, were inocula-

ted for the cow-pox, by Mr. Knight, from the arm of a child which had alſo been inoculated by him. On the next morning, the arm of the child was much inflamed, and in a few hours a ſmall veſicle appeared on the punctured part, which ſo nearly reſembled the appearance we had been taught to expect, that we concluded ſhe had received the infection. When Mr. Knight viſited the child, he expreſſed many doubts, becauſe, as I underſtood, the inflamation ſo ſpeedily followed the operation. Theſe doubts were ſoon converted into certainty, as in a ſhort time the inflamation ſubſided, and a ſlight incruſtation was formed on the veſicle, which he aſſured me had not the true character of the cow-pox; though I was, and many others not converſant with the diſeaſe might have been, miſled by the appearance. On the monday following, ſhe was inoculated in both arms, with matter taken from a different ſubject; and this was followed by a ſucceſſion of preciſely the ſame appearances as thoſe above deſcribed. On Wedneſday, ſhe was again inoculated from the arm of her brother, in whom the diſeaſe had gone on ſatiſfactorily from the firſt inoculation. This third inoculation ſucceeded completely, the arm obſerving the ſame courſe as that of her brother. Neither of the children had the ſmalleſt appearance of fever or indiſpoſition during the whole proceſs.

I am, with great reſpect, &c.

DERBY.

Groſvenor Square, May 28, 1800.

A. SCOTT, Eſq. at Maſulipatam, to Doctor JAMES ANDERSON, P. G. Madras.

This letter will be delivered to you by Nagalingam and Veeraſoolingam, two brothers who have practiſed inoculation for the Small Pox with much ſucceſs in the Guntoor Circar; and ſometimes, tho' not to ſo great an extent, in other places; Nagalingam has been here for ſome time, waiting on Doctor Harris, for the purpoſe of acquiring ſome knowledge of the Cow Pox, the genuine ſort of which is ſuppoſed to have been produced here, and I hope it will turn out to be ſo.

Our Native practioners will find no difficulty in ſubſtituting the Cow Pox for the Small Pox inoculation, if they can once be taught to know the diſeaſe, ſo as not to miſtake a ſpurious for a genuine infection, and when they come to be thoroughly convinced, that the one will effectually prevent the other.

There are three Zemindars in the Guntoor Circar who now keep inoculating Doctors in pay; viz. Vaſſareddy Vencatadry Nardoo, who was himſelf inoculated, keeps three. Vencatah Gundarow keeps one, and Mammoor Narſanah also keeps one; the other two Zemindars viz. Mamoor Vancataramaniah Row, and Bavanarain Row had each of them ſome Children belonging to their own families inoculated laſt year, and ſome of the Cutcherry ſervants likewiſe and their Children were inoculated; ſo that the practiſe ſeems to be fully eſtabliſhed in the Guntoor Circar: but whenever any of the head Inhabitants applied to me (which was very often done) for a Doctor to inoculate their Children, they uniformly gave a preference to Nagalingam, tho' I could not find that the other Practioners were leſs ſucceſsful than him.

A. SCOTT.

Maſulipatam, Oct. 13th, 1802.

Doctor ANDERSON's Answer.

Your letter by the Native inoculators was forwarded to me two days ago, on their arrival in the Black Town; and the rains have been so heavy since, I have not yet seen them; but as they have been sent by order of Government I have desired that they may come to a meeting of the Members of the Medical Board when it will be my concern to see that an arrangement is made for their being fully instructed in the essential circumstances to which you have alluded of knowing the true disease and accurately distinguishing it from every other eruption, as well as to satisfy them of its power to prevent any attack of Small Pox; having now abundance of examples in both of these situations to convince the most sceptical.

We are so much indebted to your knowledge of the customs, genius, and Language of the Talingas; in contributing to the sensible manner in which the Guntoor Zemindars have adoped Small Pox inoculation, that without pretentions to the gift of prophesy or even second sight, I foresee great facility to the introduction of Cow Pox, by a continuation of such benevolent exertions as the time necessary for the duties of your station will admit.

JAMES ANDERSON.
Fort St. George, Nov. 22d, 1802.

Mr. A. SMITH, Surgeon at Sankerdroog, to Mr. A. BERRY, Superintending Surgeon, Madras.

Since last writing you on the subject of Cow Pox inoculation, I am happy to inform you that the practice has been more extensively diffused both among the natives of this place, and of the surrounding villages, than at that time my expectation led me to suppose would be the case.

To the interest which Mr. Cockburn takes in the success of this new disease, to his persuasions and to his personal influence, this is to be attributed.

From the 27th ultimo to the 6th instant, I only inoculated 30; 19 of whom were native Children of the lowest cast, the rest belonged to sepoys. On the later day Mr. Cockburn arrived here, when all the children in the place who had not had the Small Pox, were brought to be inoculated with vaccine matter. And on that day and the following, I inoculated in all 47,—8 of whom were Brahmins.

On the 8th inst. I accompanied Mr. Cockburn to Yerapady, a populous village about 14 miles, north of this; in which there are about 400 weaving families, and a number of Brahmins, I carried with me a healthy child having on its arm a turgid vesicle of the 9th day and from it at different times gave the disease to 52 people of all ages, and 8 of whom were children of the Brahmin cast, the rest I believe belonged to people of respectable description; from the vesicle having been completely exhausted, it was not in my power to inoculate all who offered, and I believe there were about 15 who did not receive the infection, but to whom I have engaged to give it next Sunday, the 14th. when I intend being there for a few hours, to observe the success of my former inoculations, and will carry a child with me, for the above purpose. Mr. Cockburn whilst making his circuit through the lower part of the Baramahl made the beneficial effects of this new disease known to all the principal inhabitants of the villages through which he passed, and has circulated among them ad-

dresses in the Tamul language, setting forth the advantages of it. And I have been informed by him that they did not appear as if they would have the least reluctance to receive it. And that he would engage to inoculate every child in the Baramahl.

I also received from him a list of the names of about 15 children, some of them Brahmins, who have not had the Small Pox at the village of Trinchincode 7 miles distant, who are willing to receive the disease and to whom I will take an early opportunity of imparting it, it might have been made more general at that place, which is a large weaving town, but Mr. Cockburn says they had the Small Pox about 8 months ago, which occasioned some deaths.

Whilst inoculating the children at Mr. Cockburn's tent, many of the principal inhabitants of the surrounding villages were present, and were witnesses to the simplicity of the operation, as well as to that of the disease produced by it, and some of them belonging to a large village about 14 miles N. E. of this, called Mallamoodra, promised to bring their children here to be inoculated.

I to-day inoculated three more children, making in all 147.

Agreeable to your desire I sent vaccine matter to Mr. Duncan at Cuddalore, and have since been informed by him that some children have been inoculated with it. I hope it may have proved successful. I shall have the pleasure of reporting to you, in a few days my farther success at Yerapady, and at Trinchincode.—I was informed by Mr Hay, when here on his way to Salem, for the purpose of introducing the disease there, that he had submitted 12 of his patients, who had undergone the Cow Pox, to the infection of the Small Pox, by inoculation, and that no effect was produced.

This completely confirms me in our having the genuine disease in this part of the country, and that my inoculations have produced the same disease as Mr. Hay's, and the matter has not degenerated, I am equally sure of, having seen Mr. King's child whom he inoculated and whose vesicles on the 7th day, presented exactly the same appearances as those that have been produced here. I would wish however, more for the sake of experiment than from any doubts of the inefficiency of the disease in preventing the Small Pox, every idea of which must be done away by Mr. Hay's proof, to submit some of my patients to the action of variolous matter, I will be much obliged by a supply of it, if you have any of it at Madras.

I had almost forgot to mention that the disease has taken effect in the usual mild manner, on almost all those inoculated on the 5th, 6th, and 7th instant to the number of 56.

On those on whom it has not succeeded, the disease will be again given.

A. SMITH.

Sankerdroog, Nov. 12th, 1802.

Mr. W. PRICHARD, Surgeon at Tripasore, to Doctor JAMES ANDERSON, P. G. Madras.

On the 28th of last month I received the threads impregnated with variolous matter, you were so good to forward, and the same day inserted them in the Arms of the two Native Children that first had the vaccine disease, and I am happy to say without producing any effect; but to be more fully satisfied on this subject on the 7th Instant, I again inoculated these Children (not having others sufficiently advanced in the vaccine disease) with matter just taken from a small

pox puftule—This fecond inoculation has not produced any fymptom of fmall-pox.

From thefe and other inftances that we have already had, there is reafon to hope, we are now in poffeffion of the genuine cow-pox, I fhall however continue from time to time, to inoculate with variolous matter fome of my vaccinated patients.

I am forry to obferve the Natives here are fo greatly prjudiced againft inoculation, that notwithftanding Captain Bofc's zealous exertions and my utmoft endeavours, we have not yet been able to prevail on more than forty to fubmit to the operation.

I mentioned in my laft, I had inoculated a Cow with fluid of the 8th day, it did not prove fuccefsful, producing only fmall brown fcabs on the punctures.

W. PRICHARD.

Tripaffore, Nov. 14, 1802.

Doctor ANDERSON's Anfwer.

There can be no doubt that the vaccine of which you are poffeffed is genuine, as the fupply you furnifhed to Wallajahbad has been proof againft the fmall-pox, notwithftanding which, as it appears fo liable to degenerate almoft imperceptibly, fo as require an experienced eye to judge of its value, it will always be advifable, to inoculate fome of the moft approved vaccinated cafes from time to time with fmall-pox, as the only teft that can certainly be relied on, and inoculate again and again all doubtful, anomalous, or fpurious cafes; until the genuine vaccine vefcle is produced.

You will fee by a letter from Mr. Smith at Sankredroog to Dr. Berry, which I fhall publifh on Thurfday, what exertion Mr. Collector Cockburn is making in the Baramahl to effect the adoption of vaccine inoculation, and I fhould hope that a fimilar mode, would by and by enable you to have ample employment in the neighbouring populous town of Trivillore.

JAMES ANDERSON.

Fort St. George, Nov. 22, 1802.

Mr. A. KENNEDY, Surgeon at Hydrabad, to Doctor JAMES ANDERSON, P. G. Madras.

On the 27th ult. I wrote you that I had that day inoculated with frefh variolous matter, five children whom I had formerly vaccinated. I have now the pleafure to tranfmit you the notes I made of the appearances which took place on the arms of three of them, on whom the variolous matter produced a topical action.

On two of them you will obferve that it had no effect whatever, that none of them have had the fmalleft degree of ficknefs or conftitutional derangement, nor even a fingle fpot, or appearance of eruption is very certain : and from the frefhnefs of the matter with which they were inoculated, and the care taken to infert it, I am inclined to think it equally certain, that had thefe children not previoufly had the genuine vaccine difeafe, fome one or other of them ; or moft probably the whole five, would have had the fmall-pox.

Still I find fo much difficulty in procuring patients, that my principal attention at prefent is directed to keeping the difeafe alive, in hopes of having an opportunity by and by, of employing it upon the large fcale.

A. KENNEDY.

Camp near Hydrabad, Nov. 10, 1802.

Mr. KENNEDY's JOURNAL.

On the 27th of Oct. I inoculated with variolous matter, five children who had before had the vaccine disease, and each of whom had the mark of the vaccine pustule remaining upon each arm. The variolous matter was taken fresh from the arm of a boy upon whom the disease had been produced by inoculation with matter sent from the coast. They were inoculated from the primary pustule, the matter of which was still limped, on the second day after the appearance of the eruption, and the children having been brought together into the same room, the virus was carefully inserted by a lancet, at three punctures on each.

1st Patient, Timketchee, a female child of three years old; she had had symptoms of fever on the first night after the vaccine inoculation. The variolous inoculation did not produce any effect whatever in any of the three punctures.

2d Patient, Matross Miller's youngest child, two years old; nothing followed in any of the three punctures.

On both of these children the marks of the incision could be distinguished for eight or nine days afterwards.

3d Patient, Moottoo, a black boy two years old, he had fever on the first night following the vaccine inoculation. All the three punctures, from the first, occasioned some degree of irritation and inflammation.

2d Nov. (7th day.) The skin round the puncture appears thickened, the surface of the thickened part, which has hitherto had a purulent shining look, appears to-day to be drying, and very much resembles a common scab. It has altogether an appearance very different from that of the variolous pustule. The child has not had any fever, or other symptom of constitutional derangement.

4th November, (9th day.) On the right arm, where one puncture only had been made, there is now a hot dry brown scab, rather larger than a double fanam, but not much thicker than writing paper, no appearance of any matter, being lodged under it. Thickening and inflammation of the skin gone. On the left arm, where there were two punctures, there is one scab exactly resembling that described above, except that it is not so large, and another which differs in nothing but being of a lighter colour—the child is perfectly well, and has not a single spot, nor appearance of eruption either on the arm, or any where else.

5th Nov. (10th day.) Right arm scab looks as if the edges of it were about to seperate from their adhesion to the skin—left arm much as yesterday.

6th Nov. (11th day.) The scab on his right arm has fallen—the surface below almost healed—on the left arm, one scab has fallen off and the other seems ready to do so.

7th Nov. (12th day.) The least scab on the left arm has fallen off, and shews the surface below dry.

The child has been perfectly well throughout.

4th Patient—Serjeant Jones's child eighteen months old—had fever on the night following the vaccine inoculation.

2d Nov (7th day.) One puncture has produced no kind of effect whatever, but one on each arm has had a moist shining purulent look, with thickening and redness of the surrounding skin—the left arm still retains the same appearance; but the right is now dry and has a flat scab upon it—no fever nor any symptoms of constitutional arrangement has hitherto appeared.

4th Nov. 9th day—The left arm has a white, flat, purulent looking sur-

face to the extent of a quarter of an inch, but the thickening and redness of the skin are quite gone —On the right arm, the scab has become more elevated, and is of a white colour, with a mealy, scaly look—On pressure there issued from below it, a globule of very thick white pus—The child has been perfectly well since last report, no spots either near the place of insertion, nor any where else.

5th Nov. 10th day—The white elevated scab seems drier and more contracted, a little pus squeezed from beneath it, is thinner then yesterday—the left arm has still the flat purulent looking surface, though not so moist as yesterday.

6th Nov. 11th day—Scab on the right arm drier and browner, but there is still a little thin pus pass'd from below on squeezing it—Inflammation of the skin quite gone—the left arm has the same flat surface, but drier than yesterday.

7th Nov. 12th day—Scab on the right arm, dry and shriveled—the left arm drying, surface of it still flat.

8th Nov. 13th day—Scab has fallen off from the right arm—surface below nearly healed, left arm dries rather slowly.

9th Nov. 14th day—Right arm quite heal'd, left almost dry.

The child has throughout been in perfect health, without the appearance of even a single spot, on any part of his body—The film now forming on the left arm, will I presume be thrown off in a few days.

5th Patient, Matross Miller's eldest boy two years and a half old—2d Nov. 7th days report—One puncture on each arm has inflamed and thickened, and yesterday they had both a moist shining look; to-day these are both dry, and one of them scabbed. Child has been hitherto in perfect health.

4th Nov. 9th day—The inflammation at the puncture on the left arm has quite disappeared, and left only a thin desquamation of the cuticle—there is still a thin white scab on the right arm under which the skin continues somewhat red but there is no matter appears on pressure — child well, no spots nor eruption any where.

5th Nov. 10th day — Redness of the skin gone—scab dried.

6th Nov. 11th day—Scab has been rubbed off and shews the surface below nearly dry and healed.

7th Nov. 12th day—The arm healed — the child throughout has been in perfect health.

The child from whom all the above five were inoculated, had from five to ten pustules, which have observed the regular stages and appearances.

Doctor ANDERSON's Answer.

You will see by the copy of a letter from Mr. Orr at Columbo who has had considerable experience of the vaccine disease, that although the anomalous appearances with you, were sufficient to occasion doubt, yet that he was sensible from the latter accounts of Mr. Ure, you were in possession of the genuine vesicle, of which your letter of the 20th instant is now an agreeable proof; and the Journal you have kept abundantly satisfactory that no constitutional disease affected the three children who had inflammation and scabs on the part where the fresh variolous matter was inserted.

There can now be nothing so useful as preserving the disease by the weekly inoculation of a few patients until the knowledge of its value is more generally diffused, without a special attention to which the risk of losing it is too evident.

JAMES ANDERSON.

Fort St. George, 22d Nov. 1802.

Mr. GILBERT HALL, Surgeon at Trincomallee, to Doctor JAMES ANDERSON, P. G. Madras.

I have much pleaſure in diſcharging what I conceive to be my duty, by acquainting you that we have lately put the virtues of the vaccine diſeaſe, now eſtabliſhed on this iſland, to the laſt teſt, by the moſt intereſting experiment of inoculating ſubjects who had paſſed through it, with variolous matter, and of the reſult anſwering our moſt ſanguine expectation.

On the 24th ultimo being informed by a native Doctor that there was a patient in the neighbourhood a young man labouring under the natural ſmall-pox in the eighth, or ninth day of the diſeaſe, I loſt not a moment in embracing ſo favorable an opportunity, but taking with me two young healthy ſubjects a Boy and a Girl, the former about ten and the latter fourteen years old both of whom having been inoculated with the vaccine matter nearly a month before, had completely paſſed through that diſeaſe with all its characteriſtic marks, immediately went and viſited him.

I found him in a ſmall hut, extended upon a Cot, having his body almoſt entirely covered with the ſmall-pox eruption, the diſeaſe however did not appear to be of the malignant kind, the Puſtules being very diſtinct and well filled, the matter was thin and of a yellow tinge, and I had every reaſon to ſuppoſe, it was in a ſufficiently active ſtate to communicate the diſorder.

From this patient the two ſubjects I had brought with me, were immediately inoculated in the preſence of a number of ſpectators, in an open area, to whom, being at the time pretty confident of ſucceſs, I explained through an intrepreter, the nature and cauſe of this experiment.

This is now the thirteenth day of inoculation and I am happy to inform you, that no eruption, or any other diſagreeable or unpleaſant ſymptom, has taken place in either of theſe ſubjects, to throw the ſmalleſt diſcredit on this ineſtimable diſcovery.

I have likewiſe to acquaint you, that ſimilar experiments have been made by Mr. Orr of Columbo with the ſame ſucceſs, theſe no doubt will tend not only to overcome all the ſcruples which the natives might have entertained againſt the reception of this bleſſing, but alſo induce them to ſubmit to a repetition of ſuch experiments when neceſſary, to convince the ignorant and bigotted of its efficacy in preſerving them from that foul contagion of the ſmall-pox; from which the native inhabitants of this iſland in particular, have moſt ſeverely ſuffered.

By a letter lately received from Mr. Orr, he informs me that he has inoculated nearly one thouſand perſons; our diſtrict not being ſo populous we do not go on quite ſo briſkly, having only inoculated little more than two hundred. I judged it proper to take only a few at a time, leaſt by exhauſting all the ſubjects too ſoon, we might riſque the loſs of the agent altogether.

I underſtand that Mr. Rogers who is returned here and reſumed his former ſituations intends with the approbation of Mr. Chriſtie the Medical Superintendent General of this iſland, to purſue the ſame plan; Mr. Chriſtie has lately been travelling through ſeveral diſtricts to the ſouthward of Columbo, buſily occupied in propagating and diffuſing this new diſeaſe, and I am informed he has given it to no leſs than fifteen hundred perſons.

Pleaſe to accept my beſt thanks for your moſt polite attention in tranſmitting me the papers containing the correſpondence on the progreſs of vaccine inoculation through your peninſula, in the ſucceſs for which I will always feel much intereſted.

GILBERT HALL.
Surgeon H. M. Malay Reg.
Trincomallee, Nov. 6, 1802.

Doctor ANDERSON's Answer.

The adverse monsoon has prevented my receiving your Letter of the 6th instant until this moment, and deprived me so long of the pleasure of seeing that discernment, which first distinguished the true cow-pox on the Island of Ceylon, so happily employed as likewise to succeed in giving the first decided test of its value; for the accounts of Lieutenant Thiels Children, and Mr. Carnie's variolous inoculation, were not sufficiently detailed, to afford satisfaction: yours is proof positive.

The extirpation of small-pox will appear to many, as depending on general inoculation with the vaccine, but the uncertainty of preserving the cow-pox in an active state, until a new generation of subjects are born, appears to me too great, to render this method adviseable; I therefore approve of the plan you have adopted of inoculating only a few persons at a time, and by thus going on successively, you will meet the Natives, gradually deprived of their prejudices, until the source of the disease is found here as well as in England, to render general inoculation admissible.

The Papers which I have sent you, are the same as those weekly forwarded to every one professional or otherwise, whom I thought likely to contribute in any way to the advancement of vaccine inoculation, of which a hundred Copies were issued last week, a measure which will every day become less necessary as the disease advances in establishment.

JAMES ANDERSON.

Fort St. George,
Nov. 23, 1802.

THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo, to Doctor JAMES ANDERSON, P. G. Madras.

As you probably do not receive the Ceylon Paper, I enclose you a Supplement to our Government Gazette, containing a letter giving some account of the progress of the Vaccine disease on this Island.

By your printed Correspondence of the 27th October, which I received by this day's Tappall, I perceive you still entertain doubts at Madras with respect to the efficacy of the Cow-pox in India, in securing the system against the effects of variolous contagion, but I am happy to assure you, that from our experience on Ceylon, we have every reason to be perfectly satisfied, that in the Cow-pox originally received from the Stock at Bombay, and now extensively diffused over this Island, we are in possession of a certain antidote against the Small-pox contagion.

The inoculations referred to in the enclosed, were performed in the most careful manner, by Mr. Carnie, Surgeon on your establishment, and other Professional Gentlemen, on whose accuracy perfect reliance may be placed, with Variolous Matter, in the most efficacious state, taken immediately from the pustules of patients on the 9th and 10th day after the disease, it may also surely be considered as a strong proof of the efficacy of the Cow-pox, that amongst the great numbers of Patients who have now passed through the Vaccine disease on this Island, no one has been affected with Small-pox, although this disease is prevalent, both at Columbo and Jaffnapatam, and our Patients use no particular precautions in avoiding exposure to the contagion.

THOMAS CHRISTIE.

Columbo 5th Nov. 1802

THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo, to the EDITOR of the CEYLON GAZETTE.

The extensive diffusion of the cow-pox throughout this island, and the great attention of the Medical Gentlemen at the different stations to this subject, enable me to state several facts regarding the history of this disease, which from the great importance of the subject, will, I think, prove interesting to many of your readers, and altho' few of the circumstances hereafter to be mentioned, can appear novel to professional men, who are acquainted with the various writings on the vaccine disease in Europe, they may I think afford satisfaction to them, in as far as they tend to prove, that the cow-pox, when imported into the Torrid Zone, continues to preserve the same benignant specific character, and to be governed by the same laws, as in the more temperate regions of Europe.

Above two thousand subjects of all ages and descriptions, have been inoculated with cow-pox in the district of Columbo during last month, and although I have not yet received the regular reports from the more distant stations, I have reason to believe from occasional communications, that the number of persons inoculated throughout Ceylon during October, has not been less than three thousand five hundred.

In all these the disease has preserved its original mild nature, and in no case have any bad consequences, or dangerous symptoms, been occasioned by the inoculation.

In all cases in which the inoculation succeeds, slight inflammation and elevation of the skin are perceptible on the 2d, 3d, 4th or 5th day, and about the 6th, a vesicle is in general distinctly formed. This vesicle of a cellular structure, depressed in the centre, and containing pellucid lymph, continues to encrease till about the 4th day, when the matter begins to ooze out, and the areola to form, or what I think more descriptive in a native subject, a circular inflammation not unlike a common boil, the elevation and hardness of which, can be plainly felt to extend for half an inch or more round the vesicle. In European subjects, this assumes the appearance of a beautiful scarlet areola, and is the principal distinguishing characteristic of the disease, without which the inoculation cannot be considered as effective. About the 12th day, this circular inflammation gradually subsides, and the whole of the matter having oozed from the vesicle, now forms a shining scab of a brown colour, which in a few days drops off, and sometimes leaves a superficial sore behind it.

The size of the pustule is various in different subjects, but the circumference of the vesicle in general exceeds somewhat that of a large pea.

Pain in the axilla though not always present, is a very constant attendant of the disease, and generally comes on about the 5th and lasts to the 10th day. Some degree of fever is also in most instances present, for a day or two, and generally accedes about the 6th, 7th or 8th day.

I have also observed in a few instances a short paroxism of fever on the 1st, 2d or 3d days from inoculation, and have been the more particular in remarking this circumstance, in consequence of an observation of Mr Kennedy at Hydrabad on this subject, but as it happened with us in only a very small proportion of cases, I am apt to believe that in these its occurrence was accidental, and not at all connected with the inoculation, since similar slight attacks of fever are by no means unfrequent, with the inhabitants of this Island.

We have generally at Columbo inoculated in both arms for the sake of security, except in the case of young infants, and I think this precaution certainly diminishes the risk of failure, and also tends to encrease the fever, which in adults I consider as rather a desireable object, since it never proceeds to any alarming height, and its occurrence seems in general to satisfy the minds of the patient themselves, more completely, than when the symptoms are confined to the mere local affections.

In two or three children where the fever was unusually smart, the irritation seemed to have been kept up by worms in the intestines, as immediate relief was obtained on voiding some of these. In one case of this discription the patient, an European child of two years of age, was afflicted on the 8th day from inoculation, with spasms of rather an alarming nature, but these I believe proceeded entirely from worms, as his abdomen was hard and tense, and he appeared to refer his compliants to that part. These disagreeable symptoms were readily removed in this child, as in other instances, by the operation of a small dose of Calomel, which brought away some worms.

In one patient, a native lascorin aged 24 years, who accompanied me from Matura to Hambangtotte, (a distance of fifty miles) in order to introduce the disease at the latter station, there was on the 8th day from inoculation, an evident encrease of the salivary discharge, and in addition to the usual symptoms of pain in the exilla, night fever, and head-ache, he complained of soreness of throat, and difficulty in swallowing, for that and the following day, but his complaints were upon the whole attended with so little inconvenience, that although he travelled on those days, he preferred walking, to riding in a doolie, which was provided for him. The soreness of the throat, and encrease of the salivary discharge might possibly be accidental, but from analogy with the small pox, and the circumstance of these symptoms keeping pace with the vaccine fever, I am apt to believe they were really connected with the disease, and indeed, in one or two cases, which have occurred since, the patients have complained of slight soreness of the throat, on the day on which they had the cow-pox fever.

Although the occurrence of any pustule, except on the inoculated parts, is an extremely rare occurrence in the true vaccine disease, and is I believe still doubted by Dr. Jenner, yet we have on Ceylon certainly seen three or four instances where one or more pustules, bearing all the characteristics of the vaccine, have appeared on parts of the body distant from the seat of inoculation, and which I cannot conceive were occasioned either by an accidental prick of the lancet, or from a secondary inoculation, by means of the patient scratching the pustule, and afterwards another part of his body, as the secondary pustule shewed itself on a distant part of the body and at a time when no virus was formed in the inoculated pustule.

This is most strongly exemplified in the case of a boy, now under the care of Mr. Orr, in whom a distinct well marked vaccine pustule appeared on the back part of the thigh, on the fourth day after inoculation in both arms. The inoculated parts shewed the usual appearance of incipient pustules on the third day, and on the following that on the thigh appeared, since which time the three pustules have run their course regularly.

Mr. Carnie formerly inoculated at Jaffnapatnam with matter taken from a secondary pustule on the wrist, and with it produced the true vaccine disease. Mr. Orr has this day inoculated three persons with matter from the pustules on the thigh of this patient, and if he succeeds in producing the true vaccine disease, the experiment will I

think be conclusive, as to the possibility of secondary pustules, and also of their containing the same specific virus as the inoculated ones.

I have never seen any general eruption which I could with reason attribute to the vaccine inoculation; patients under vaccine inoculation have occasionally shewn me slight eruptions of pimples or prickly heat, at the appearance of which they were alarmed, but these have soon died away, and seemed to me to be only casual eruptions, which are so common at all times in this country, and must necessarily be more frequent, when the patient labours under any febrile affection.

Nine or ten patients who have passed through the cow-pox on this island, have already been subjected to the experiment of inoculation with small pox matter, and all of them have perfectly resisted the action of that virus, so that the fact, that a person who has passed through the cow-pox is ever afterwards secure against the effects of exposure to small pox contagion may now be considered as fully demonstrated in this country, as well as in Europe.

The existence of the natural small pox has however also given us an opportunity, of seeing verified an observation of Doctor Woodville's that although a patient who has passed through the cow-pox, is for ever afterwards secure against the effects of exposure to small pox contagion yet that inoculation for the former disease, will not anticipate the small pox, or prevent its progress, if the infection has been received previous to inoculation, or even previous to the accession of the cow-pox fever.

In two cases at Columbo, the patients on the day after inoculation were seized with severe fever, and on the third day, an eruption of small pox took place, which however could be traced to natural infection, the disease being in the neighbourhood. The cow-pox pustules formed at the usual time, and both diseases pursued their progress without interruption.

One of the cases terminated fatally, and their occurrence ought to teach us the necessity of cautioning our patients, against exposing themselves to the infection of small pox, until the Cow pox has finished its course, and of preparing them in all cases where the small pox is prevalent, for the possibility of the occurrence of both diseases.

From the prevalence of Measles at Point de Galle, we have also had an opportunity in two cases, of observing the combination of measles with cow-pox, or rather the occurrence of both diseases at the same time, in the same subject, for they both ran their course separately and distinctly. In one of these cases which I saw, the eruption of measles appeared on the third day after inoculation, and neither the eruption or fever seemed at all encreased by the presence of the vaccine infection. The vaccine vesicle formed in the usual time, but it was the opinion of Doctor Yates, medical superintendent of the Galle district, who carefully watched the progress of these cases, that the formation of the areola was in both retarded one or two days.

The shortness of time since the cow pox has been introduced in this island, does not enable me to say much with respect to its effects, in removing, alleviating, or preventing other ailments. On this subject, I have only to remark, that in an European child who was cutting teeth, and for some days had been subject to an eruption of vesicles, which came out in a few hours on different parts of his body and left a distressing rawness and excoriation, this complaint was removed on the accession of the cow-pox fever, and formation of the areola round the pustule, soon after which the skin became clean, and free from eruption.

The cow-pox has in general been propagated from one station to another on this island, by means of inoculated patients, for we have found dried matter on threads, or glass,

a very uncertain means of conveying the infection to any distance. The only cases in which inoculation with dried matter has succeeded on Ceylon, are those of John Sybelle at Trincomalie with matter from Bombay thirty two days old, and that of Anatchie at Columbo, with matter from Trincomalie six days old' both of which have formerly been noticed in your paper. In the letter, the fever was very considerable, and the pustule from the nature of the inoculation by incision, was oval, and much larger than usual. In consequence of this it would appear that the virus in the pustule was in a very diluted state, for out of eighteen patients inoculated from her, only one child took the disease, while of an equal number inoculated from this child, who had a small vesicle, scarcely one failed.

As soon as matter can be procured from the vesicle, it appears to be effective, and continues so till the areola begins to form. I have occasionally made use of matter on the 6th 7th 8th and 9th days with effect, but generally prefer it on the 7th or 8th. The inoculation with recent matter has always been performed at Colombo, in the same way as is usual for the small pox, by inserting in an oblique direction the point of a lancet armed with virus, immediately under the cuticle, and retaining it there for some seconds. The inoculation in this way, generally takes place in both arms, (if both are punctured) and seldom fails altogether. Our failures have not I think exceeded one in fifteen cases, and in these I have always found the patients cheerfully submit to a second or third trial. Indeed the eagerness which the natives of Ceylon, particularly on this side of the island, shew to benefit by this discovery, is really wonderful and truly gratifying.

The inoculation having sometimes assumed a doubtful appearance, the operation has been repeated, and in several of the cases, the first inoculation has afterwards put on the regular appearance, and the second also has taken effect, having produced another pustule which ran its course at the same time with the original one although in a different stage.

The possibility also of producing the vaccine pustule on a person who has had the small-pox, has been put to the test of experiment by Mr. Carnie, who inoculated several himself and several children who had passed through the Small Pox, and in one of these a distinct Vaccine pustule was produced, though not attended with any fever or pain in the axilla.

Our rapid success in extending the disease here, is I think in a great degree to be attributed, to the minds of the Natives having been familiarized to the idea of inoculation, by means of the benevolent institutions which have for some time been established on this island, for inoculation with the small-pox, and to the wise measure of Government, in circulating addresses in the Native languages, explaining the numerous and important advantages of the Vaccine inoculation.

This practice is now happily introduced at even the most remote stations on this Island, and I entertain the most sanguine hopes, that by means of it, we shall in a few months eradicate small pox entirely from these settlements.

I am happy also to add that the Vaccine inoculation has been practised with considerable success in some of the interior parts of the Peninsula of India, with matter sent from Ceylon, as will appear from the enclosed letter transmitted at Jaffnapatnam.

A patient has this moment been brought to me by Mr. Orr, in whom there is reason to believe the disease has been communicated by accidental contact, in consequence of his sleeping with an inoculated person, there is an appearance of a regular pustule on the back part of the shoulder, but as Mr. Orr has

promised to communicate the particulars of this case in writing, I shall transmit his letter for insertion in a future paper.

THO. CHRISTIE,
MED. SUPT. GENL.
Columbo, 2d Nov. 1802.

Mr. JOHN HAY, Assistant Surgeon at Errode, to Mr. J. CARNIE, Surgeon.

I have deferred acknowledging the receipt of and thanking you for the supply of Vaccine virus you had the goodness to dispatch for me the 24th ultimo, until I could inform you the success I had with it.

I have had in all upwards of 80 subjects inoculated since, and the disease has appeared in all in the most mild and favourable manner. It will also be a satisfaction to know that from your attention I have been enabled to supply all the Stations within 200 miles of this.

JOHN HAY,
ASSISTANT SURGEON.
Errode 18th Oct. 1802.

Doctor JAMES ANDERSON, P. G. Madras, to T. CHRISTIE, Esq. Medical Superintendant General at Columbo.

Your Letter and Supplement having arrived too late for the Government Gazette, I have for more immediate information caused them to be inserted in the next Madras Paper, and think the notice of the modes in which the Measels and Vaccine disease affect each other will be attended with great utility.

You will see by the two last Gazettes which I have had the pleasure to transmit, that the same success has attended the variolous inoculation you have experienced: in shewing the inability to affect Patients vaccinated with the matter sent by Mr. Carnie to Mr. Hay, and that sent by Mr. Rogers and transmitted by me to Mr. Prichard.

As you are so much on Ceylon before us on the Coast, any communications of the Vaccine disease will always be very acceptable to,

JAMES ANDERSON.
Fort St. George, Nov. 26th 1802.

Translation of a Talingo Letter from VASSAREDDY VANKATADRY NAIKER BAHADER, Munnasaolutan of Moortezanagur, Mustoobanagur, Kumbabadoor, &c. &c. to the Hon. JAMES ANDERSON, P. G. Madras.

After due compliments, thank God I am well here, and am anxious to hear from you, both of your good health and welfare, as I know that you are a gentlemen of great merit and quality. I had from length of time an ambitious desire to visit you, to accomplish it my time is continually employed in praying to Almighty God, and that is in the bounds of Providence both by your favor and regard, I am honored here with support.

Besides this some English Gentlemen here, told me that you very much wish to see the two Doctors, namely Kalliparah Verasoolingam and Nagalingam who stay with me in the capacity of my family doctors, and tho' their attendance is wanted here every day, I was induced to send them to you, supposing

that you was greatly inclined to see them.

Since I am under the orders of the Honorable Company, I hope you will deem these my servants as your own, and will treat them kindly in any thing whatsoever, I expect your doing this as a friend, and when you shall have done with them the business for which you sent for them, which I hope will require no great length of time, that you will send them back to me.

The reason why I wish these peoples return soon is, that they from long experience know the constitutions both of my immediate relations, and servants; and can apply Medical Assistance when necessary.

What is there more to add both for your honoring me with your favor and regard, and such things as I may have occasion to request.

6th day or Arpeesee of Doondorbee or 14th October 1802.

Doctor ANDERSON's Answer.

The pleasure I enjoy in the honor of your favor of Oct. 14th, by Kalliparah Veerasoolingam and Nagalingum, can only be estimated, as coming from the same person who caused himself to be inoculated for the small-pox, not only as a preservative against the casual disease, but likewise as an example to the people, and whose character has further appeared in endeavouring to rear a manufactory of raw silk for their support, and the present attention to those useful men is a continued proof of philanthropy.

Your physicians having become so successful in the small-pox inoculation must account for their assistance being desired here as the small-pox raged at Madras about the beginning of the year, when we had discovered no method of overcoming the prejudices of the people against inoculation, and were in hopes that their assistance would prove effectual; but since they have arrived, it appears that they are not acquainted with the language of this country, and the people here no ways acquainted with them, so that except the poor and needy who are induced by means of subsistence, the rich inhabitants continue to prefer their old prejudices.

Divine Providence however, having now bestowed a blessing to humanity, that may without impiety be considered an avatar, since a physician named Jenner the Dahnwantree of this Calpa, has discovered cows in England, that like Camadenu have teats and udders stored with Amurtum that without risk of life is a shield against the loathsome pestilence of small-pox.

The Amurtum introduced here is now under the investigation of your Doctors, and as soon as it appears that they are fully acquainted with its genuine nature and properties: the Medical Board of which I have the honor to be a member, will I have no doubt happily embrace the opportunity of recommending their return to Guntoor, with a prospect of public advantage, as well as that your family may suffer the least possible inconveniance by their absence, and in the mean time any civility or attention towards them that may be in my power shall not be neglected.

JAMES ANDERSON.

Fort St. George, 1st Dec. 1802.

Doctor JAMES ANDERSON, P. G. Madras, to the EDITOR of the GOVERNMENT GAZETTE.

Be so good as to insert the accompanying Extracts in the next Gazette, in proof of the genuineness of the contents of the vaccine vesi-

cle, Amurdum; ſent from Madras to Arcot, and from Errode to Seringapatam of the Ceylon ſtock; in no reſpect differing from the cow-pox of England, either in deſcription, or prevention of ſmall-pox.

JAMES ANDERSON,
Fort St. George, Dec. 8, 1802.

Extract of a Letter from Mr. WILSON, dated Seringapatam, 23d Nov. 1802.

"Mr. Frank inoculated two of the children of the regiment with variolous matter, who had gone through the vaccine diſeaſe, neither of whom took the infection; he would have carried his experiments ſtill farther, but there was an unconquerable averſion in moſt of the parents, to ſubmit to a ſecond operation."

Extract of a Letter from Mr. ABERCROMBIE, dated Arcot, 2d Dec. 1802.

"I formerly mentioned that I had inoculated ſeveral children with the cow-pox matter which you were kind enough to ſend me in your letter of the 20th October—The reſult has been, that out of eleven children, being all the ſubjects I could then procure, whom I firſt inoculated with vaccine virus, and afterwards with the moſt active variolus matter, not one ever ſhowed the ſmalleſt ſymptom of the latter diſeaſe. Beſides inoculating the children with ſmall-pox matter, I had them kept continually in the ſame houſe with a child, in whom the variola was in its higheſt perfection, and went through its regular courſe."

Doctor HELENUS SCOTT, to the EDITOR of the BOMBAY COURIER.

It will give ſatisfaction to the public to learn that Anna Duſthill (the firſt child who had the cow-pox in India) has been inoculated with the matter of ſmall-pox and has reſiſted its action.

Mr. Kennedy was ſo good as to ſend me from Hydrabad ſome variolous matter on a thread with which Dr. Kier and myſelf inoculated Anna in two places, very near to each other, on each arm. The cuticle was divided and a thread of a quarter of an inch was carefully placed in four of the ſaid inciſions. The threads were afterwards well ſecured by plaiſters and bandages. This was done on the 5th of this month.

On the 4th day after inoculation, the arms were examined. One was entirely healed, but the other had inflamed and feſtered. She had had no fever, nor any ſymptom of an affection of the ſyſtem from the variolous matter. The ſore on her arm is ſtill unhealed, and almoſt as large as a rupee. She is in perfect good health, nor has ſhe been ill for a moment ſince ſhe was inoculated on the 5th inſtant.

I muſt ſuppoſe that this angry ſore on the arm ariſes from the matter of ſmall pox and affords a proof of its activity. It would no doubt have been better performed with matter in a perfectly recent ſtate; but in order to get matter in ſuch a condition I muſt in the firſt inſtance have communicated the diſeaſe to a ſubject who never had the ſmall-pox, I did not think myſelf

justified in producing such a disease in this populous Island, which for so many months past has been exempted from it. If once begun, I could not know when it might stop nor what misery it might produce. With such a prospect it is impossible to justify an experiment like this, however important its object may be. I had every reason to believe that no ill could arise from inoculating this child with variolous matter, who had already undergone the vaccine disease.

It is well known that Anna Dusthill is the only one that took the vaccine disease of all those that were inoculated by the matter from Bussora, and her security from the small pox is a proof that the cow-pox of India is of the genuine kind. From Ann alone, the disease of this country was derived; she is the mother of all our poison, the beneficent Medea of India.

H. SCOTT.

Bombay, Nov. 24, 1802.

Doctor HELENUS SCOTT of Bombay, to Doctor JAMES ANDERSON, P. G. Madras.

I was duly favored with your letter inclosing some variolous matter from Mr. Wise and Mr. Dalton, and a few days afterwards Mr. Kennedy was so good as to send me a farther supply from Hyderabad. This as being the most recent I preferred for a trial, the result of which you will find in the accompanying letter to the Editor of one of our papers.

I beg of you to give my best thanks to Mr. Dalton and Mr. Wise for their obliging attention.

H. SCOTT.

Bombay, Nov 24, 1802.

P. S. I would recommend the vaccine matter for inoculation to be taken not from the mildest cases but from the most severe. These are more distinctly marked, can hardly be mistaken and produce not a fever-er disease than the apparently milder produce. The affection of the arm and of the axillary glands seems to be as violent here as in England, nor is there the least appearance of the disease becoming milder, by having passed thro' so many bodies. This is agreeable to what Dr. De Carro has observed in Germany, who concludes that there can no more be a necessity of returning to the cow for the virus.

H. SCOTT.

Doctor ANDERSON's Answer.

Your letter of Nov. 24, with the address to the Editor of the Bombay Courier on the subject of cow-pox, of which experience renders your opinion more weighty, will excuse my rendering them as public as possible here, for general information; and congratulate your happy extirpation of small pox from the island of Bombay.

The mistake of a spurious disease at one station, by educing good from seeming evil, has warranted a liberal distribution of small-pox to meet and examine the vaccine invaders, and been attended with the satisfactory effects that you will see in the different Government Gazettes, of establishing the character of genuine cow-pox, at Hydrabad, Seringapatam, Errode, Wallajabad, Trippassore, Arcot and the same experiments have now been made on a number of persons at Madras with equal success, so that you may rest assured Anna Dusthill will never have the small-pox.

Your acknowledgements shall be made to Mr. Wise and Mr. Dalton for the supply of variolous virus, with which the latter frequently

furnished me, being well situated for that purpose some months past, by inoculating in Lord Clive's Garden; and now the introduction of cow-pox and exclusion of all variolous cases, has opened a school for native inoculators from whence they will be supplied with patients to practice small-pox inoculation upon, at their own homes; until they are satisfied of the impossibility of producing a constitutional disease in those who have had the genuine vaccine.

Having punctually transmitted you a copy of every publication which I have thought proper to make on this subject, I shall be glad when convenient, to see your sentiments, especially if they differ from or promise any thing new in addition to those; of which I am not without hopes, as the caution of making use of such virus only as attends the most severe cases, implies an apprehension of the disease becoming too mild to resist the infection of small pox.

Doctor Jenner states the passage of the disease through 1,700 person in succession, and its arrival here by sea and land in thread and rags, without any preceptible difference from the most genuine appearance in England, is proof like holy writ that by proper care it may be preserved; and the utility of preferring the most severe cases may prove a means of preventing spurious disease.

But the time being now arrived of considering how the vaccine disease may be best applied to general utility, two different methods present themselves at first sight; the one, which I have principally wished to inculcate, is the preservation of it in all its genuine character, by inoculation in weekly succession at every station.

The other mode is the inoculating of all that can be persuaded to submit to the operation, which appears to me may be necessary, on any attack of endemic small pox, but as a general practice throughout the whole country at once, it is fraught with too much risk of leaving us without subjects, and thereby losing the disease.

To obviate every difficulty, I understand that your Government have appointed a person to the specific care of the cow-pox, which has been attended with the most beneficial consequences, and may prove sufficient for the Island, but as the surgeons here are at greater distance from each other than Bombay from the Continent; establishments at many different Stations, as is practised on Ceylon will certainly be required, to produce any considerable effect.

On this particular I should be glad to see your ideas fully expressed; the subject is worthy of the Pen of Cicero, the Pencil of Apelles, or the Tongue of Demosthenes, with the spirit and animation possessed by those great men.

JAMES ANDERSON.

Fort St. George, Dec. 13, 1802.

Mr. JOHN HAY, Assistant Surgeon at Errode, to Doctor JAMES ANDERSON, P. G. Madras.

I have the honor to enclose a monthly statement, which will shew what exertions have been made here to extirpate small-pox; these have been attended with the best success, the vaccine still having retained its mildest form, and having been proved in twenty six cases to obviate the reception of variolous infection and inoculation into the system.

More extensive observations in this new disease enables me to say, that although the slightest degree of fever probably occurs in every one subjected to it, yet in three cases only the attack has been smart, and then it happened on the 5th, 6th,

and 7th days, the axillary pain and enlargement of glands have been almoft conftant, and the areola though generally of moderate extent and little painful, has fometimes after the vefick having been frequently punctured to afford inoculating lymph, become angry, fiery and much inflamed. I can fay with certainty, not more than one in thirty has had the moft trivial ailment, and although all muft have had fome affection of conftitution on the abforption of vaccine lymph into the habit, yet this has been fo little difcernable, that not even the parents have noticed in their children any thing more than the local appearances.

In two cafes I have feen diftinct fecondary puftules in fize little more than a large pin's head; one was at an inch diftance from the inoculated vefick and the other rather further removed—they each contained the pale blueifh lymph and had a very different appearance from any other vefick or puftule except the vaccine, which I have feen before. In four other cafes, fores exactly refembling thofe after the vaccine inoculated vefick, have appeared but I am apt to think that thefe have been occafioned by the nails of the children conveying particles of matter from the original vefick to the other parts. I have marked the progrefs of the fores and find them correfpond with thofe which remain after the fcabbing procefs; thefe are the only obfervations I have at prefent to offer on this interefting fubject.

The common period of appearance of primary fever after the expofure to infection of the natural fmall-pox being 14 days, in my humble judgement fufficiently explains the circumftance of the vaccine not preventing fmall-pox in the Ceylon woman, whofe cafe Mr. Frank relates, it being allowable to fuppofe that this woman had imbibed the Germ of the difeafe from the Barracks contiguous to her houfe, where the fmall-pox then raged. As the cafe informs us, the woman may have been four days previous to the inoculation under the influence of fmall-pox infection.

I fhould be wanting in juftice to Mr. Garrow, were I to omit accounting for my good fortune in finding fo many perfons willing to receive cow-pox. It has been to his benevolence, humanity, and unremitting endeavours to perfuade the natives to fubmit to the operation, that my fuccefs latterly has been almoft entirely owing.

State of the Inoculation of the Cow-pox at, and in the vicinity of Errode, 4th December, 1802.

Cafts,	Men.	Women	Boys.	Girls.	Total.
European,			1	1	2
Brahmin,		2	8	1	11
Gentoo,		1	51	48	100
Malabar,			507	612	1119
Canara,		1	57	53	111
Moor,			17	14	31
Periah,			51	64	115
Total		4	692	793	1489
Inoculated in Oct. 1802.					271
In all					1760

JOHN HAY.
Affiftant Surgeon.

Errode, Dec. 4, 1802.

Doctor ANDERSON's *Anfwer.*

The rapid progrefs you have made in vaccine inoculation has extended already to Chittledroog as appears by a Letter which I have juft received from Mr. Wyfe, and the obfervations and variolous inoculations you have made, are fatisfactory proofs of the vaccine di-

ſeaſe having been preſerved by your care and attention in a genuine ſtate; but it is not for me to thank you for the adminiſtration and attendance of ſo numerous and various a deſcription of patients as your monthly ſtatements contain; a conſideration this, no doubt of government, whenever they may be pleaſed to take up the vaccination of the natives of the country.

Accept my beſt wiſhes and reſt aſſured of my ſincere Friendſhip and regard.

JAMES. ANDERSON.
PHYSICIAN GENERAL.

Fort St. George, }
Dec. 15, 1802. }

Lieutenant J. E. THEILE, at Mullativo, to Doctor JAMES ANDERSON, P. G. Madras.

Having been thrice favored by you with the Government Gazette, or with the correſpondence relative to the vaccine inoculation, yet without the favor of an encloſed letter from yourſelf,—I therefore moſt humbly requeſt of you, to be ſo good as to honor me with a few lines, to learn the reaſon of your kindneſs.

When at this place, on the northern diſtrict of Ceylon, the vaccine matter was introduced by Mr. Hall, my children were the firſt inoculated, and I made all the exertions in my power, in encouraging the inhabitants to adopt ſo valuable a bleſſing as the cow-pox; and at the requeſt of Dr. Carnie, I ſent my two ſons to Jaffana in order to propagate the diſeaſe there, and when the boys had paſſed through the vaccine, I ſuffered them to be inoculated with the ſmall-pox, which however took no effect, and all remained in perfect health.

This gave me a pleaſing opportunity to correſpond with the Medical Superintendant General at Columbo, Dr. Rogers, and Dr. Carnie, and therefore I ſuppoſe that thoſe gentlemen have mentioned my name, and by this means I have had the pleaſure to receive your kind communications.

The prejudices amongſt the inhabitants of the Vany againſt the inoculation of the cow-pox, ſeems to ſubſide, for Mr Wolff, medical overſeer at this place, makes a ſucceſsful progreſs in the propagation of it.

J. E. THEILE,
LIEUTENANT.

Mullativo, Nov. 26. 1802.

Doctor ANDERSON's Anſwer.

Your favor of the 26th ultimo which I have juſt received is ſo ſatisfactory in ſtating the motives of my troubling you with the correſpondence on vaccine inoculation, at a time when the public mind was agitated about the genuineneſs of the diſeaſe, and its power of reſiſting ſmall-pox in this country; that I can make no apology for omitting to write you particularly at the ſame time, as you had every right to expect from me, in ſo publicly bringing forward your name.

It gives me great pleaſure however to ſay that your children are the firſt as far as I know, that have appeared in India on this important ſervice, and although the queſtion is now correctly and extenſively decided in favor of vaccination: as you will ſee by the papers which I have the honor to encloſe, the merit of attention to the public welfare is not thereby leſſened.

Permit me to congratulate you on the reſcue of your children during

their whole lives from a loathſome diſeaſe, as appears fully demonſtrated by Dr. Jenner and many eminent phyſicians who have applied themſelves to the inveſtigation of this ſubject.

And believe me with much eſteem your ſincere well-wiſher.

JAMES ANDERSON,
PHYSIAN GENERAL.

Fort St. George, Dec. 15, 1802.

Extract of a Letter from Mr. C. ROGERS, Medical Superintendant at Trincomallee, dated 24th Nov. 1802.

"The vaccine inoculation has ſucceeded all over Ceylon in a manner exceeding our moſt ſanguine hopes—Patients have been repeatedly ſubjected to the ordeal of variolous inoculation, and natural expoſure; and have uniformly reſiſted the action of that virus, ſo that the doubts of the moſt ſceptical muſt yield to the teſt of experiment."

Mr. W. GOURLAY, Aſſiſtant Surgeon at Angaripar, to Doctor JAMES ANDERSON, P. G. Madras.

I have been duly favored with the printed papers relative to the vaccine diſeaſe which you had the goodneſs to forward to me.

I have been ſome what ſucceſsful of late, in propagating, the vaccine diſeaſe, and as I have made a trial to aſcertain whether I have been inoculating with matter from the genuine cow-pox, I think it my duty to acquaint you with the reſult.

On the 10th ultimo, I inoculated two boys who had gone through the vaccine diſeaſe (communicated to them in Bombay 18th September,) with recent variolous matter; no other effect was produced from this, than a ſlight degree of inflammation at the punctures which continued for nearly two days.

I lately ſelected from among thoſe (at this ſtation) who had gone through the vaccine diſeaſe in the moſt ſatisfactory manner, five young men, and as many children; Theſe on the morning of the 27th ult. I inoculated with *recent* variolous matter from the patient in the ſixth or ſeventh day of the diſeaſe: no effect whatever has been produced from this.

This trial had a very good effect in convincing many of the natives here, as to the utility of the cow-pox, which they were doubtful of before.

The ſmall-pox has been prevalent here of late, but I am hopeful that in a ſhort time few at this ſtation and the adjacent villages will be ſuſceptible of its contagion.

W. GOURLAY,
Aſſiſtant Surgeon.

Angaripar, 6th Dec. 1802

P. S. None of the twelve vaccinated patients I inoculated with variolous matter, ever had the ſmall-pox.

Doctor ANDERSON's Anſwer.

Matter from the vaccinated patients, whom you ſo happily brought from Bombay to Calicut, having found its way to Cundapore, Mr. Hoyes has likewiſe proved its genuine quality by the teſt of ſmall-pox, and as I have heard nothing further from Mr. Perrin, who made remarks on both diſeaſes about the time you left him. I conclude that the vaccine which you have diſſeminated over the Malabar

Coast, has every where been found genuine, and there can be no doubt that the natives will be more readily satisfied of its value by this proof, than by all other arguments; and, in as far as it may appear to have occasioned no delay, may warrant the more immediate, permanent, and general establishment, of vaccine inoculation.

I will thank you to send if practicable, a vaccinated patient, or otherwise some dried vaccine Lymph, to Mr. Boodle at Palamcottah, and the disease having so far proved genuine, it will be sufficient for gentlemen in future. to report to their respective and immediate superintendants, the superintending Surgeons

JAMES ANDERSON.
Physician General.

Fort St. George, Dec. 15, 1802.

FORT WILLIAM, *December* 1, 1802.

The Governor General in Council is pleased to direct, that the following letter, with its enclosures, addressed by John Fleming, Esq. first Member of the Medical Board, to His Excellency in Council, be published for general information.

JOHN FLEMING, Esq. First Member of the Medical Board at Calcutta, to His Excellency the MARQUIS WELLESLEY, K. P. Governor General in Council.

My Lord,

It is with the highest satisfaction I do myself the honour of acquainting your Excellency that after repeated disappointments we have at last through the benevolent attention of Dr. Anderson at Madras, been so fortunate as to obtain the recent matter of the cow-pox, and that we have thereby been enabled to introduce the practice of vaccination into this settlement. I herewith enclose the letter, with which I was favoured by the Doctor on the subject, together with one, which I received from Captain Anderson, commander of the ship Hunter, whose assiduous attention to ensure success to the important commission, with which he was entrusted, is very meritorious.

John Norton the boy, vaccinated by Captain Anderson on the 12th instant, arrived in Calcutta on the 17th, with such evident and decisive marks on his arm of being infected with the genuine Cow-pox, as left no room for doubt or hesitation. As the matter was already ripe for communicating the infection, three children born of European parents, belonging to his Majesty's 10th Regiment, were vaccinated by Mr. William Russell on that day; and on the day following, the operation was performed on eight others. Among these were two children of Mr. Barlow, one of Colonel Dyer, one of Mr. Birch, one of Mr. Trail and one of Mr. Binny, in all of whom, as well as in the three children of the 10th Regiment, I had an opportunity of observing the progress of the infection, and from comparing the symptoms and appearances produced by it with the minute and circumstantial descriptions given by Dr. Jenner, Mr. Atkin, and Dr. De Carro, and with the coloured plates, by which their descriptions are illustrated, I am perfectly satisfied, that it was the true vaccine disease. Messrs. Russells, Hare, Shoolbred, and other Medical gentlemen, who had an opportunity of seeing the children, are fully impressed with the same conviction. In confirmation of this important fact, I think it proper to mention that three children who were inocu-

lated with the thread sent me by Capt. Anderson from Kedgeree, as mentioned in his letter, received the infection and shewed in the progress of the disease, the same characteristic symptoms and appearances on the arm, as those that were inoculated from Norton. The same satisfactory result was experienced in respect to two children inoculated by Mr. Shoolbred on the 20th, and two others on the 21st, from matter taken from Norton's arm on the 19th; all of whom, he assures me, exhibited in the most unequivocal manner, the distinguishing symptoms of the genuine cow-pox.

The settlement being now, as I conceive, in complete possession of the benefit derived to mankind from Doctor Jenner's celebrated discovery I take the liberty of submitting to your Excellency's consideration, my opinion on the best mode of preserving the continuance of so great a blessing, and spreading it as rapidly as possible throughout the provinces.

For attaining the first of these important objects, I would recommend that a Surgeon of approved skill and assiduity should be appointed to the charge of preserving a constant supply of recent genuine matter for the use of the metropolis and the subordinate stations; and that it should be a part of his duty not only to vaccinate the children of such of the Natives as might apply to him, but also to take every opportunity to instruct the Hindoo and Mahomedan Physicians in the proper mode of performing the operation, and to give them precise and clear information respecting those symptoms and appearances by which the specific genuine cow-pox may be distinguished from other eruptions.

To facilate the general adoption of the practice of vaccination by the Natives, I beg leave to suggest that a notification should be published in the Persian, Hindevy, and Bengalese languages, and also in the Sanscrit, giving

1st—A succinct history of the discovery, in which the curious, and to the Hindoos, very interesting circumstance that this wonderful preventive was originally procured from the body of the cow should be emphatically remarked.

2d—An explanation of the important, and essential advantages which vaccination possesses over the small-pox inoculation, and

Lastly, an earnest exhortation to the Natives of these provinces to lose no time in availing themselves of this inestimable benefit, scarcely inferior to any that ever was communicated by one nation to another.

I have the honor to be,
With great respect,
My Lord, &c.
J. FLEMING,
First Member of the M. B.

Calcutta, Nov. 29, 1802.

(COPY).

Doctor JAMES ANDERSON, P. G. Madras, to JOHN FLEMING, Esq. First Member of the Medical Board, Calcutta.

Not having heard of the Bombay cow-pox matter succeeding in Bengal, I take the opportunity of the ship Hunter sailing, to inoculate two boys born of European parents at Botany Bay (where the small-pox has never appeared) belonging to the ship, by whom Captain Anderson, the Commander, hopes of being able to continue the disease in succession until his arrival at Calcutta.

The matter with which these two boys have been inoculated was taken last night from the arm of a healthy child inoculated at Chingleput on the 1st instant, with threads sent on

the 14th ult. from Trincomalle by Mr. Rogers, the disease appears to all here to be of the genuine kind, and confident of your attention to promote the benefit of this invaluable discovery. I am &c.

JAMES ANDERSON.

Fort St. George, Oct. 11, 1802.

(COPY.)

Captain W. ANDERSON of the Ship Hunter, to JOHN FLEMING, Esq. First Member of the Medical Board, Calcutta.

Agreeably to your desire, I have the pleasure of sending you the following memorandums, respecting the persons I inoculated for the cow-pox during my passage from Madras.

John Cresswell, a boy born at Port Jackson of European parents, aged about thirteen years, was inoculated at Doctor Anderson's house at Madras, on the 10th of October, from a native Child who had arrived that day from Chingleput. As the disease made its appearance rather late, and afterwards advanced very slowly, I did not take matter from him till the 22d ultimo, when I inoculated M. A. an European child, aged eighteen months. From her I inoculated Harry, a Malay boy, aged about seven years, on the 2d of November. And on the 12th, Charles Norton, a boy born at Port Jackson of European parents, aged about fifteen years, was inoculated from Harry. The disease having made its appearance in due time as soon as the ship arrived at Diamond Harbour, I sent him to town, where he arrived on the 19th instant, and was disposed of as you directed.

The cotton threads which I sent you from Kedgeree, were strongly impregnated with vaccine matter taken from the European child and the Malay boy, on the 2d and 12th instant, as particularly marked on each.

(Signed) W. ANDERSON.

Calcutta, November 27, 1802.

The GOVERNOR GENERAL IN COUNCIL is pleased to order;

1st—That the high approbation of His Excellency in Council be signified to Doctor James Anderson, Physician General and first Member of the Hospital Board upon the Establishment of Fort St. George, for the benevolent attention, assiduity, and skill, manifested by him in promoting the introduction into these Provinces of the benefit of the valuable and important discovery made by Doctor Jenner, and that this order be transmitted to the Right Honorable the Governor in Council of Fort St. George, for the purpose of being duly signified to Doctor Anderson.

2d—That the Chief Secretary do signify to Captain Anderson, Commander of the ship Hunter, the thanks of the Governor General in Council, for his assiduous attention in insuring the success of the important commission with which he was entrusted.

3d—That the Chief Secretary do signify the approbation of the Governor General in Council to John Fleming, Esq. and to Messrs. Russels, Hare, and Shoolbred, and the other Medical Gentlemen, employed upon this important occasion for their diligence and ability, in promoting at this Presidency the successful introduction of Doctor Jenner's discovery.

4th—That Mr. William Russel be appointed to superintend the further promotion of the benefits of Dr. Jenner's discovery throughout

the provinces subject to the immediate Government of this Presidency.

5th—That a notification be prepared and published in the Persian, Hindevy, Bengalee, and Sanscrit languages, according to the suggestion of Mr. Fleming.

By Command of His Excellency the Most Noble the Governor General in Council,

J. LUMSDEN,
Chief Sec. to Govt.

THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo, to Doctor JAMES ANDERSON, P. G. Madras,

I have to return you many thanks, for your printed correspondence on the vaccine disease, which I have regularly received up to the 16th Nov. and beg leave to congratulate you on the fortunate introduction of the cow-pox at the Presidency of Madras, where I doubt not it will be attended with the most complete success.

On this island our success in vaccine inoculation surpassed my most sanguine expectations, which will appear from the accompanying letter, a printed copy of which, I take the liberty of inclosing, for your information.

It may be satisfactory to you to mention, that my information with respect to the numbers inoculated here, is derived from the most authentic sources, as I regularly receive from all the Medical Gentlemen engaged in this pursuit on Ceylon, a register specifying the date of the inoculation, the name, age, sex, and cast of the patients inoculated, the name of the patients from whom the matter is taken, the nature and period of the fever, the number of the pustules, and the day on which the patient is discharged with a printed certificate of his having passed thro' the cow-pox; so that if at any time an accident should happen, in consequence of the introduction of a spurious disease, it may immediately be traced to its source.

THOMAS CHRISTIE.

Columbo, Dec. 2, 1802.

Doctor ANDERSON's Answer.

Your Letter and address in the Ceylon Gazette, are very opportune at this time, as a means of directing practitioners how to draw out reports that may meet the public eye the most satisfactorily, and thus strenghten the hands, and pave the way for administration to advance in this great work, so happily begun; of rendering cow-pox inoculation a general and inestimable blessing.

These important reasons will satisfy you of the propriety of inserting your Letters in the public prints here, for general information; and it will give you great pleasure to learn that the two Botany Bay Boys fortunately inoculated with Cow-pox by Mr Rogers, have been the means of conveying the genuine disease to Calcutta.

The vaccine may now therefore be considered as introduced in the happiest manner, into the whole of British India; the establishment, and preservation of it, must depend on higher powers than come to the share of professional men, and there is every appearance that these powers will be effectually exerted.

For five months past, I have inserted in the weekly papers every thing regarding cow-pox that came to my knowledge; since that period the liberal exertions of the Surgeons

have not only effected its introduction every where, but have likewise proved its exact correspondence with the disease in England, as well in appearance, as resistance to small-pox, so that a spurious disease has only been found in one place, which would never have come in question, had such reports been made, as you have pointed out.

The exertions of the Surgeons, have not only diffused it to a much greater extent than appears in my publications but have likewise transmitted it to Tranquebar and Pondicherry, so that it is only our Northern Circars where it has been found spurious, that are now unprovided with the genuine virus.

The want of patients however, has been attended with its disappearance at some stations, and therefore it is obvious, that until some plan is adopted, of establishing many different stations over the whole country, that may be able in case of failure, mutually to supply each other; the exertions of individuals cannot ensure its permanency.

JAMES ANDERSON.

Fort St. George, Dec. 20, 1802.

THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo, to the EDITOR of the CEYLON GAZETTE.

I have the satisfaction to state, that the persons mentioned in my letter to you of the 16th instant as having been affected with cow-pox, and afterwards sleeping with Andrian Roderigo, while labouring under small-pox, continue in perfect health, as well as all those who had been inoculated with variolous matter.

The efficacy of the cow-pox in preventing the effects of small-pox contagion, has, since the date of my last, been also remarkably exemplified in a Chingalese family in the Pettah of this place. On the 12th of November, I inoculated with vaccine matter, Jenama a Chingalese girl, and three other children in the same family. In Jenama the inoculation did not take effect, but having been exposed to variolous contagion, she was, on the 15th, seized with smart fever, and on the 18th, a general eruption appeared. When I visited her on the 19th, I found her evidently affected with small-pox, the disease being distinct, but well marked. The vaccine vesicles in the other three children were distinctly formed, but as they had not had any remarkable degree of fever, I cautioned the parents against allowing them to remain with their Sister who had small pox, and recommended their removal to another house.

On calling again to see Jenama on the 21st, I found that my directions on this point had not been observed, and that she, with the other three children, remained in the same hovel. Jenama's small-pox pustules were approaching to maturation, and the cow-pox pustules in the other children had regularly advanced in their progress, and were surrounded with the usual areola.

As all further caution now appeared unnecessary, I assured the father that the children might now continue together without any additional risk, and I am happy to say that on calling at the house last night, I found Jenama perfectly recovered from small pox, and that the other children had completely resisted the action of the contagion, and remained in perfect health.

The occurrence however of small-pox in Jenama's case, and in another which I have just heard of suggest the propriety of repeating the caution, with respect to the necessity of directing vaccine patients to avoid all exposure to small-pox contagion, until the vaccine areola is formed, and the pustule begun

to scab, and to avoid all possibility of false alarms, and misrepresentations on this subject, we ought in every case where there is reason to apprehend the presence of small-pox contagion, to forewarn our patients of the possibility of the occurrence of both diseases, if the small-pox infection has been received before the vaccine pustule has completed its course.

Mr. Huberts, a private practitioner in Columbo, has just been with me, to mention a case, in which an eruption of distinct small-pox took place on the 10th day after vaccine inoculation, and which created in him a considerable degree of alarm, but in this case, it was so evident that the contagion had been received previous to inoculation, that far from invalidating the proofs of the preventative efficacy of the cow-pox, the frequent occurrence of the co-existence of both diseases from previous infection, while, in no one case, the small-pox has occurred from subsequent exposure, only tends to confirm in my mind, the irrefragable proofs of the perfect efficacy of our new disease.

Mr. Huberts was about a fortnight ago called to a family, in which one child laboured under confluent small-pox of the worst kind. He immediately expressed his fear that this patient could not recover, but recommended that two other children who were in the family, should be removed to another house, and inoculated with vaccine matter. This was immediately done, and both inoculations took effect, but on the 7th day, one of the children was seized with smart fever, which continued till the 10th, when an eruption of distinct small-pox took place. It is evident that this child had received the contagion from her sister, previous to inoculation with the cow-pox, and there is reason to believe, that the former disease was ameliorated by the presence of the latter.

The experiment of making persons who had been vaccinated, sleep with patients labouring under small-pox, has been lately repeated at Jaffnapatam, with the same success as at Columbo, and the subsequent inoculation with variolous matter continues to be occasionally practised at the different stations on the Island, without producing any disease.

The proofs of the preventative power of the cow-pox on this Island, are therefore now more than sufficient to satisfy every reasonable mind, and I am happy to say that the inhabitants here of all ranks, descriptions, and religions, place the utmost confidence in its efficacy.

Upwards of two thousand persons have been inoculated with cow-pox by Mr. Orr alone, and the number of people vaccinated throughout the Island is certainly not less than ten thousand. Of these above six housand have been inoculated in the Columbo district, and the good effects of the introduction of the cow-pox are very evident in the Pettah of this place, where small-pox is becoming much less prevalent.

Judging from our past success, and the great numbers who daily crowd to us for the purpose of being inoculated, we may indulge well grounded hopes, that the vaccine inoculation will very soon become almost general here, and that the small-pox contagion will ere long, be expelled for ever from this Island.

Doctor Pearson, who next to the immortal Jenner, has perhaps distinguished himself most by impartial investigation of this subject has recorded two cases in which a severe disease was produced, in consequence of the presence of Psora, (itch) and as I observe from a late work of the learned Doctor Thornton on the subject of cow-pox, that he believes the presence of Psora ought, "to form a ground of exclusion to this or any other inoculation," it may be of importance to mention that from the great prevalence of this complaint amongst the

natives of India, we ſhould have been under the neceſſity of excluding a very great proportion of the maſs of the people, from the benefits of this diſcovery, unleſs we had ventured to practiſe vaccine inoculation, even in caſes where a conſiderable degree of Pſora exiſted.

We have accordingly inoculated a great many people affected with Pſora, and I am happy to ſay, that I have not hitherto experienced any conſiderable inconvenience, from extending the practice to patients of this deſcription, although a clean part of the ſkin ought always to be choſen in theſe caſes, as the vaccine puſtule, from being ſcratched, is apt to degenerate into a ſimple ulceration.

I ſhall make only one more remark on this ſubject, on which I am afraid, notwithſtanding its importance, many of your readers will conceive I have already been too prolix, I have obſerved that within the laſt fortnight during which we have here had almoſt conſtant rains, and moiſt weather, many more failures have occurred amongſt my inoculated patients than formerly, and on enquiry, I have found that ſeveral of my patients in whom the inoculation had failed, complained of Catarrh, which can readily be conceived to diminiſh the ſuſceptibility for cow-pox, but the failures have been ſo much more frequent than formerly, that I am apt to believe, that amongſt the natives, who generally go with their arms uncovered, the rain alſo may often act directly by diluting, or waſhing away the virus, though we are at all times careful to inſert it a conſiderable way under the cuticle.

THOMAS CHRISTIE.

Columbo, Nov. 30, 1802.

Doctor JAMES ANDERSON, P. G. to the EDITOR of the MADRAS GAZETTE.

A Paper publiſhed laſt year at Whitby by John G. Loy, M. D. having accidentally fallen into my hand, the Publication here may be attended with valuable conſequence in the hands of ſuch of your Readers as are curious in reſearch into the origin of cow-pox.

JAMES ANDERSON.

Fort St. George, Dec. 24th, 1802.

" The horſes that communicated the infection to their dreſſers, were affected with a general as well as a topical diſeaſe. The animals, at the commencement of their diſorder, were evidently in a feveriſh ſtate, from which they were relieved as ſoon as the complaint appeared at their heels, and an eruption upon their ſkin. The horſe too, from whom the infectious matter was procured for inoculation, had a conſiderable indiſpoſition previous to the diſeaſe at his heels, which was attended as in the others, with an eruption over the greateſt part of his body; but thoſe that did not communicate the diſeaſe at all, had a local affection only."

Mr. J. G. KLEIN, Surgeon at Tranquebar, to Doctor JAMES ANDERSON, P. G. Madras.

With great pleaſure I have learned by the laſt publications of your intereſting correſpondence on Variolœ Vaccina which you had the goodneſs to communicate to the Rev. Dr. John that you at laſt have happily ſucceeded in introducing and eſtabliſhing this new and moſt beneficial diſeaſe at Madras, relying now on your kind and generous diſpoſition and zeal to promote important objects to the benefit of the public, I take the liberty to addreſs myſelf to you with the requeſt to favor me with a ſmall ſupply of genuine vaccine matter, or to direct me kindly to whom I may apply for ſome which inſures ſucceſs, in any of the neareſt

ſtations; we have as yet not been ſo fortunate to get it into our poſſeſſions, tho' I have taken great pains to procure the ſame from Negapatam, from whence I was twice ſupplied with ſome threads impregnated with that virus by the politeneſs of the Medical Gentlemen there, but both times it proved abortive, and of a ſpurious nature, the firſt time three children were inoculated ſucceſſively, one of which belongs to Dr. John, but the appearances of the inoculated part were perfectly ſimilar to thoſe Mr. Richardſon of Trichinopoly has mentioned to you in his letter, without any further effect, and the ſecond time, none of thoſe characteriſtic ſymptoms ſo clearly deſcribed in Dr. Jenner's work were to be obſerved, but the local infection, which alſo in a few days diſappeared, there is therefore no doubt that the matter has been either originally ſpurious or degenerated by unforeſeen means, as alſo Mr. James begins to ſuppoſe—having thus twice not obtained the wiſhed for ſucceſs in my endeavours to propagate this great benefit the vaccine inoculation amongſt the inhabitants of our ſettlement, I am very anxious to be more ſucceſsful the third time, and flatter myſelf you will kindly oblige me by complying with my humble requeſt.

Drs. John and Ruttler beg you to accept of their beſt reſpects and moſt obliging thanks for the kind communication of your printed letters.

J. G. KLEIN.

Tranquebar, Dec. 19, 1802.

Doctor ANDERSON's Anſwer.

From the peruſal of your letter, it appears that I have anticipated your poſſeſſion of cow-pox at Tranquebar, but have the pleaſure to tell you that Mr. Hay at Errode and Dr. Chriſtie at Wallajabad are the perſons who have moſt diſtinguiſhed themſelves in the ſucceſsful management and diſtribution of this diſeaſe in the Carnatic, the latter of whom is however too diſtant to afford you a ready ſupply, but I have no doubt that Mr. Hay who is more in your neighbourhood, will on application adviſe and promote your wiſhes to effect this valuable purpoſe.

Be ſo good as make my reſpects to the Rev. Drs. John and Ruttler and in hopes of hearing ſoon of your complete ſucceſs. I am, &c.

JAMES ANDERSON.

Madras, Dec. 27, 1802.

Mr. J. KING, Surgeon at Ballari, to Doctor JAMES ANDERSON, P. G. Madras.

Your letter of the 5th ult. addreſſed to me at this place I had not the pleaſure of receiving until the 8th inſt. it being ſent by ſome miſtake to Seringapatam, and did not return from thence until that period with ſeveral others of a ſubſequent date, after my leaving Ryacottah I was retained at Bangalore and its vicinity by violent and inceſſant rains for above ten days, and nothing but the friendly reception and attention of Capt. Macauly during my ſtay under his roof made amends for the protraction of my journey. I there took the advantage of carrying on the old ſtock of vaccine virus brought from Errode and Ryacottah, and commenced by inoculating one of my houſe keeper's children on the 15th of Nov. taken from a child of one of his domeſtics who had been inoculated by Mr. Tozer. I left Bangalore on the 16th, and continued my experiments in regular ſucceſſion at the intervals of ſix or ſeven days until my arrival at this place on the 30th ultimo, and have the ſatisfaction to inform you that the ſymptoms of all throughout the different ſtages have been perfectly mild and regular, not a ſingle anomalous one

having made its appearance. The last of my servant's children that I inoculated on the road was at a village about seven sultan coss from hence, on the morning of the 29th November, this child had been in the habit of sleeping every night on the same mat with the one inoculated at Bangalore, and altho' in a very confined atmosphere, being a small hut quite covered with leaves, he contracted not the least symptom of the disease until introduced by the lancet—another horsekeeper's child of mine was inoculated in the intermediate space, from the arm of the one previously performed on at Bangalore, and is perfectly recovered, as are the other two. On the 5th instant I inoculated a child of Lieutenant Fitchet's, belonging to His Majesty's 73d Regiment, and on the 6th Mr. Surgeon Peyton took some virus from the same pustule as I had done on the preceding day and communicated it to Master Macdonald, a child of Major Macdonald, of His Majesty's 73d Regiment, when I inoculated two more children of Lieutenant Fitchet's, drawings from whose arms have since been taken on the spot by that gentleman, and being extremely well executed, I have the pleasure to enclose them—on the 12th I accompanied Mr. Surgeon Mein to an appartment in the Garrison Hospital, where Mr. Assistant Surgeon Hogg inoculated seven natives from the pustule of Miss Eliza Fitchet, and on the 13th Mr. Surgeon Mein took more virus from the same subject and inoculated four more natives, Mr. Hogg marched that morning for Gooty, and took his patients with him, I have inoculated several since from the same source, and I hope very shortly it will be diffused throughout the whole of the ceded districts—the symptoms of every one at present here are coming on in a very pleasing manner. I cannot help observing that the peculiar florid appearance that encircled the pustule in my own child's arm is at present equally expressive in Master Macdonald, whose arm I just now inspected, and which happy symptom when I was under the most dreadful apprehensions for a beloved child dissipated my fears, and roused my drooping spirits.

That god-like omen set my heart at ease,
And with a conscious blush proclaimed the true disease.

I most sincerely wish you every kind of success in encouraging the practice of this kind of inoculation, and make no doubt if it continues to be sanctioned by a Gentleman of your established reputation and professional abilities, it will ultimately become general throughout the Peninsula. Since writing the above I have received a drawing taken from Master Macdonald's arm by Lieutenant Fitchet about 11 o'clock, just after I left the house, this is the 11th day from the insertion of the vaccine virus, I enclose it with those of his own children.

J. KING,
SURGEON.

Ballari, 17th December, 1802.

N. B.—The drawings of Lieutenant Fitcher's are from one on the 5th and one on the 6th December. I mean the days they were inoculated.

Doctor ANDERSON's Answer.

Mr. Hay has at this rate inoculated your little girl to some purpose, in making so complete a vaccine missionary of the Father; and I trust, that while you continue to rescue the present generation, and thus exempt millions yet unborn from a loathsome disease; your fame will glide on, encreasing like the waters of the Tumboodra, or the Peninsula, on either hand of your journey from Errode to Ballari.

The drawings, specified with the number of days after inoculation

are proofs of the genuine disease: and in case of degeneracy in the stock or offsets, ever taking place hereafter; no original sin can be imputed to the seed.

It will be a happy circumstance if every one possessed of a disease, that requires neither Hospital nor Medicine, should think himself responsible for its preservation and extension, in emulation of your beneficent humanity.

Observing that you are confined in practice to your immediate friends and dependants, it may be of use to say, that in talking of cow-pox, I found the Natives were distressed, as they understood thereby Murrain; a more dreadful pestilence than Small Pox; and the term vaccine was heard with a vacant countenance, as a word that conveyed no meaning to them whatever; I therefore spoke of Amurtum when the scene brightened up, with the rapidity of an electrical stroke, no article in their Mythology being more universally understood than that of the Cowrma or Turtle Avatar, where Amurtum is produced by churning the ocean.

Although Amurtum is the most proper term for milk, yet it comprehends Butter, Cheese, Butter Milk, Whey, Curd, Cream, and those who are possessed of Camadenu, the Cow of plenty, enjoy likewise Gold, Jewels, contentment and ease, and all the temporal benefits which the heart can wish or desire.

How far this may agree with the Nectar and Ambrosia of ancient Europe, or the Golden Calf of the Israelites, I shall not enquire, provided you can find cow-pox patients, by any better means.

JAMES ANDERSON, P. G.

Fort St. George, Dec. 27, 1802.

Mr. SONNERAT, at Pondicherry, to Doctor JAMES ANDERSON, P. G. Madras.

I have duly received all the papers relative to the cow-pox which you have had the kindness to send me and for which I beg you may accept my best thanks; I am very happy to find that this practice is becoming prevalent all over India, and hope that by the general inoculation of infants it will at length accomplish the extermination of a most loathsome and fatal disease, a point which could never have been attained by variolous inoculation, for however salutary that practice may have been to the Individual inoculated; it undoubtedly had the effect of rendering the malady more general and of spreading its pestilential contagion more universally—you will oblige me much by continuing to send me the papers, they are particularly acceptable to Madame de Kerjean, who intends to have her two young ones vaccinated in the course of next month, and is consequently desirous to become acquainted with every observation on this subject.

Our Physicians at Pondicherry have been vaccinating for some days past with great success, Ladies married and single, young people, and great number of Children undergo this operation, I presume the English Surgeon stationed here has not failed to send you weekly details of his progress. It is a noble discovery, and the author of it merits an altar.

Accept my profound respect, and believe me with sincere attachment,

SONNERAT.

Pondicherry, Dec. 24, 1802.

Doctor ANDERSON's Answer.

It gives me great pleasure to see the use that has already been made of the vaccine at Pondicherry, and there is no doubt that Europeans

and their immediate connections, will soon reap its benefits every where, so that introduction amongst the natives of the country, is now become the object most deserving attention.

The subject may be tolerably explained to them, by shewing the vesicle on cows teats, and milk maids fingers at the same time; but having no sufficient number of drawings for this purpose, the invention of a name has been of some service, and Amurtum produced at Bombay from an English ship that churned the sea, over the back not only of the turtle, but of all the monsters of the deep, opens the existing channels of imagination, without which there is no road to the heart.

As you however are skilled in Indian lore, I will thank you for any remarks with which you may favor me, and am much flattered by the attentions of Madame de Kerjean to my feeble endeavours, sincerely congratulating her on the resolution she has taken to vaccinate her children.

Accept my best wishes for your health.

JAMES ANDERSON.

Fort St. George, Dec. 28, 1802.

Mr. WILLIAM ORD, Surgeon of the General Hospital, to Doctor JAMES ANDERSON, P. G. Madras.

From what passed between us in a late conversation with you, I apprehend you consider me but a lukewarm supporter of the grand cause, now at issue; and feel myself called upon to assure you, that although I have hitherto been a silent, I have by no means been an idle, or indifferent spectator, of what has been doing during the last twelve months, to introduce, and render permanently beneficial in this part of the world, the vaccine inoculation.

After repeated failures with the matter sent to you from different places, Dr. Christie of Wallajahbad sent down two children, from whose arms I inoculated four, and have since proceeded with uninterrupted success to vaccinate great numbers of all ages, colours and casts; so little variety, so little deviation from the progress of the disease, as it has been repeatedly described, have occurred to me, that without following some of your ingenious correspondents into the regions of imagination, I should be really puzzled, were I to attempt to advance any thing new on the subject. No first-night fevers, no cutaneous eruptions, or secondary pustules have presented themselves to my observation; a slight elevation and redness of the skin was generally perceptible on the third or fourth day after inoculation, the pustule in a vesicular form (containing always the most limpid fluid) increased gradually until the twelfth or thirteenth, and then assumed the appearance of a dark brown crust, not unlike a small Tamarind stone, and seldom remained longer on the arm than the seventeenth or eighteenth day, the areola usually shewed itself about the seventh or eighth day, and did not disappear until the crust was completely formed; feverish symptoms and pain in the axilla were sometimes, but by no means generally observed on the sixth or seventh day. Such without an exception has been the regular routine of symptoms among my patients, and no sort of evil has hitherto followed, indeed I might venture to assert, that several children, previously considered as puny and delicate, have thriven and improved greatly since being vaccinated. 'Tis true I had not those difficulties to encounter, or those prejudices to overcome which fell to the lot of many of my brethren at the Outstations, the detail of those forms a very interesting part of the history

of vaccination in India—Here our efforts have been seconded by the philanthropic benevolence which is ever the characteristic of enlightened minds, and to the credit of the fair sex let me assert, that in them, as far as my observations have gone, the vaccine disease has found its warmest and most zealous advocates; It was not necessary to address them in the energetic and impressive language used by Dr. Lettsom to our country women in Britain.* The incitements held out by the humane Doctor, appeared here to be universally felt, and many mothers, not contented with merely sheltering their own offspring behind the Jennerian ægis, made every possible use of the example to induce their domestic servants to participate in the blessings it offered. As this class of people may be considered as an intermediate link in the chain of society between us and the mass of Natives, much good has already been derived, and much more must follow from this mode of familiarizing them with the appearance, and inestimable properties of the disease—Thus supported we cannot fail to insure such a succession of patients as will effectually do away all risk of losing the needful supply of vaccine matter, even though the preservation of it should continue to be the exclusive care, of individuals—I have inoculated with variolous matter the two first children who went through the cow-pox under my care, the pustule proceeded regularly for the first four days, on the fifth it began to fade, and on the seventh was a dry scab; nothing like fever, or constitutional affection of any kind observed, tho' the children carefully attended to all along, no doubt can be entertained of activity of the variolous m made use of, as the person whom it was taken died of the fluent small-pox; the matter I to Nellore and Pondicherry by desire, has been the means of in ducing the disease at those stati as I have been informed by Me Stewart and Scarman, I will co nue to embrace every opportu that offers of forwarding active ter to stations where it has not received.

WILLIAM ORD.
General Hospital, 1st January, 1

Doctor ANDERSON's Answer.

Let no one complain of what has been written to describe a stranger on his first appearance, when many supposed that in this climate, the cow-pox might be found unequal to the task of preventing the access of small-pox, and therefore the observance of deviations how rare soever, at the same time that they may contribute to the illustration of the subject, will put practitioners on the guard against the use of Anomal lest the genuine character sho thereby disappear.

The public are much indebted you and many Gentlemen over whole Country, for the d ci proofs which you have made,

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* Mothers! your infants cannot reason for themselves, but they upon your protection by every tender and winning gesture. How h you been delighted when their playful hands instinctively press y bosoms, to solicit the flow of that nutritive fluid, that percolates from your hearts blood and adds to theirs? When they look up to you with smiling innocence, how ardently you press their lips with kisses and caresses: With ardour I invoke you to shield their endearing features with the ægis of Jenner.

Lettsom's Observations on the Cow Pox.

the dependence to be had on cow-pox to prevent small pox, and it is well that you have taken so early an opportunity of making those, as in all probability the time is at hand when it will be impossible to procure small Pox, for the purpose.

Being ready to subscribe to the commendation of the Ladies, it pleases me much to see the sensibility and intelligence of the sex, supported by such adequate authority, as I am not unacquainted with your inoculation in succession in a neighbouring garden; notwithstanding all which, my mind is not made up to the propriety of leaving the preservation of so great a treasure as the cow-pox, solely in charge of individuals.

Although not alluded to in your letter, there remains a further consideration to give the cow-pox that general countenance in this country, which its safety and efficacy merit (viz.) The charitable oblations offered at the shrine of Patragali the malignant daughter of Seva; as the defect of these which may now be expected, will distress the poor; unless some means may be devised, to induce her votaries, to consign small-pox to the Tomb, and elevate cow-pox to the Temple.

Mr. Scarman tells me that the Clergy of Pondicherry offer Prayers and thanksgiving to Almighty God, for the blessing of cow-pox; which has enabled him and Mr. Potion, to perform there, already, near a hundred and fifty inoculations.

JAMES ANDERSON.

Garden, Jan. 3. 1803.

Mr. JAMES WYSE, Assistant Surgeon at Chittledroog, to Doctor JAMES ANDERSON, P. G. Madras.

I am just favored with the Supplement of the Gazette and avail myself of another mean of persuading the natives here to submit themselves to the benefit of our new disease, by requesting that (if it can conveniently be done) you would forward to this place a copy of the papers ordered to be published in the various languages of the country, for I am concerned to inform you that we have not been able to prevail on a single inhabitant of Chittledroog to accept of it— While in other places, Natives in multitudes are inoculated, you may be assured I feel much regret at not being able to convince them of the greatness of the blessing, which providence has lately bestowed on mankind—Would any application to the Rajah of Mysore for that purpose be useful? and how is it to be effected? It is with some difficulty I have been able to preserve the disease—and every day that difficulty encreases—Two or three pustules are now all my stock —and I have yet no new subject ready to receive and propagate it. I shall state these leading circumstances to Mr. Anderson at Seringapatam — perhaps he may find means to interest the Dewan of Mysore in the business.

JAMES WYSE.

Chittledroog, Dec. 25, 1802.

Doctor ANDERSON's Answer.

The want of patients of which you complain has already been felt at several stations, and might soon take place every where, did not the marked attention of Government now promise every support; and in the mean time I have the pleasure to enclose you a copy of the Manchester Advertisement, which can more readily be translated into the Canari language at Chittledroog than at Madras; an answer from the Superintending Surgeon will likewise inform you of whatever may be in his power before this can reach you.

JAMES ANDERSON.

Fort St. George, Jan. 3, 1803.

Mr. R. B. PERRIN, Assistant Surgeon in Wynaad, to Doctor JAMES ANDERSON, P. G. Madras.

I have been regularly favored with the paper relative to the vaccine disease, for which I feel myself highly obliged, and beg you will accept my best thanks, yet I cannot help observing my apparent disregard to the injunction in your printed letter addressed to me, has not entitled me to that mark of your attention; I should most studiously have fulfilled every part of it, had not the late disturbance in the Wynaad, called forth the services of our battalion, and removed me from Calicut.

A few days previous to my departure, a very extraordinary case of combination, occurred with one of my vaccinated patients, a boy of nine or ten years of age, which I fully purposed communicating to you, but when at Cotaparamba I found I had mislaid my memorandums. I was very anxious, as far as was then in my power, to put the virus to the test, and procured some variolous matter from Mr. Wilson at Calicut. I received it about two P. M. he had taken it the day before from a patient in its most active state; I directly inserted it in the arm of a young healthy sepoy, who had gone through the vaccine disease in the most complete and satisfactory manner, and from whose arm I had vaccinated many, none of whom failed, or deviated in the general appearance or progress, from the true disease, I am very happy to add he completely resisted the infection, his constitution being in no manner affected, or had he on any part of his body the least appearance of a pustule, the part incised was somewhat inflamed, and formed a scab which fell off by the 10th or 11th day—Since I have been here my papers have been found, I therefore am enabled to state the following case accurately, on the 10th October I vaccinated two boys in one house with the same lancet and matter, the eldest in one arm, and the youngest in both, on the 2d day there was a considerable redness round the punctures, the evening of the 3d they complained of pain in the axilia, the 4th in the morning they both complained of having had fever during the night, at this time there was an increased warmth of the skin, from this to the evening of the 6th the vesicles rapidly enlarged, I ordered the mother to bring both to my house the following day for the purpose of vaccinating others, the youngest only was brought with a fine vesicle on each arm; on inquiry, I was told the other was very ill with a violent fever, I directly went to the house, and found it to be the case, attended with great inclination to vomit; his vesicle was equally as forward as the other boy's,—I gave a a little Antimonial, and directed him to be kept cool during the day and night; on the following morning, being the 8th from vaccination, I was surprized to find the small-pox appearing in great number, I again compared the vesicle, but could perceive no essential difference, I ordered the youngest boy to be kept as much as possible with him, I took no matter from the eldest but continued to vaccinate from the youngest; they all had the disease as perfect as himself; both the diseases appeared to run through their proper courses until the 23d when I left Calicut, which was the 14th day of the cow-pox from the day of vaccination inclusive, and the 6th of the small-pox from the day of eruption inclusive; he had nearly 200 pustules; the youngest boy I afterwards learned did not take the small-pox.

I was at first led to think the vaccine matter was spurious, but on a further consideration, I am convinced the boy must have been

under the influence of the variolous infection previous to the insertion of the vaccine, from the many people labouring under the small-pox contiguous to the house in all directions: another proof in favour of the vaccine may with propriety be here deduced, the abovementioned sepoy was taken to the jail for the purpose of vaccinating the prisoners from his *vesicle with more certainty, when the atmosphere was impregnated from several malignant and putrid cases of small-pox, yet he took not the disease.

R. B. PERRIN,
Assistant Surgeon,
2d B. 5th Reg. B. N. I.
Camp Daraloor, Cotior Ghaut,
Wynaad, Dec. 23d, 1802.

Extract of a Letter from Mr. A. STEWART, Assistant Surgeon, to Doctor BERRY, dated Nellore, January 2, 1803.

" I am happy to inform you that the Ceylon vaccine disease is here in its most genuine character, and that it is likely soon to be diffused through every part of the district—Mr. Travers has very humanely ordered in one of the most respectable native Doctors from each Talook; who will be detained here until he is perfectly familiarized with the appearance of the vaccine pustule, and convinced of the value and mildness of the disease; many of the most respectable inhabitants in this village have already permitted their children to be inoculated; and this I conceive the most favourable mode, of paving the way for its introduction among the lower orders; supplies of virus have been sent to Masulipatam and Guntoor, but I have not heard whether they have produced the desired effect."

Doctor JAMES ANDERSON, P. G. Madras, to Mr. R. B. PERRIN, Assistant Surgeon, Wynaad.

From the zealous and marked attention which you gave to the cow-pox, as appears by your letter to me of October 10th, it is evident that nothing less than absolute necessity, could have interupted your prosecution of the subject; notwithstanding which, the case of the Sepoy, resisting variolous inoculation, stated in this communication of December 23d is perfectly satisfactory; I must however advert to the premature exposure of your other vaccinated patient, as neither Doctor Jenner nor any other writer that I have perused, insist on a power in the vaccine, to resist variolous infection, until it has finished its course.

JAMES ANDERSON.
Physician General.
Fort St. George, Jan. 8th, 1803.

Extract of a Letter from Mr. FOWLE, Assistant Surgeon, at Ballari, to Doctor JAMES ANDERSON, P. G. Madras, dated January 3, 1803.

" I intend taking some vaccine matter from hence to Gandicotta, and if possible, spread it in those parts of the Ceded Districts from some patients which Mr. King the Garrison Surgeon here, has now under his care."

THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo, to Doctor JAMES ANDERSON, P. G. Madras.

I have the pleafure to enclofe you the copy of a Government Advertifement on the fubject of cow-pox which will be publifhed in the Chingalefe and Malabar languages, for circulation amongft the natives of this ifland.

THOMAS CHRISTIE.

Columbo, 29th Dec. 1802.

CEYLON GOVERNMENT ADVERTISEMENT.

In an addrefs to the natives of Ceylon, Government had formerly the fatisfaction of announcing the introduction into this ifland, of the cow-pox as a fafe, mild, and certain preventative againft that worft of maladies, the fmall-pox, and of pointing out the numerous advantages that had attended the vaccine innoculation in Europe and other quarters of the world.

Government has now the additional gratification of calling the attention of the inhabitants, to the wonderful fuccefs and advantages that have already attended the practice in this ifland.

It is little more than three months fince the firft introduction of cow-pox into Ceylon, and in that fhort fpace of time upwards of ten thoufand people, of all ages and defcriptions, have been inoculated in the different parts of this ifland, and in no one cafe has any finifter event, or dangerous fymptom fupervened, in confequence of the inoculation.

The efficacy of the cow-pox in preventing the fmall-pox has alfo been fully demonftrated throughout this ifland to every reafonable mind for in no one cafe has it ever happened, that a patient who has paffed through the cow-pox, and obtained a certificate to that effect from any medical man on the ifland has ever afterwards had the fmall-pox, although a great many, after having had the cow-pox, have been for the fake of experiment, inoculated with the moft active fmall-pox matter, and have alfo flept with patients during their whole illnefs, who laboured under the moft malignant and confluent difeafe.

The natives are however warned, that if they have caught fmall-pox before they have had the cow-pox fever, they may poffibly have both difeafes, and that a few cafes of this kind have occurred, one or two of which have terminated fatally.

It has alfo happened, that one or two patients who had been inoculated, conceiving they had the cow-pox, have not returned to fhew themfelves to the furgeon, and procure his certificate, have afterwards been feized with fmall-pox, but on a ftrict enquiry into all thefe cafes it has always been proved, that the patients have been deceived by falfe appearances, and had not had the true cow-pox, for as has been faid before in no one inftance has a patient who has regularly attended the inoculating furgeon, and received his certificate ever after had the fmall-pox.

This fafe and mild inoculation continues to be practifed every morning, by all the European Surgeons on this ifland, gratis, and the natives are hereby earneftly intreated to embrace the opportunity of benefiting by this ineftimable difcovery, as foon as poffible, without longer expofing themfelves or their offfpring to that dreadful malady the fmall-pox, which ftill continues to prevail in many parts of this ifland; but to obtain perfect fecurity againft the latter difeafe, they are informed that after inoculation, they muft regularly attend the Surgeon who inoculated them, until he declares they are fafe, and gives them certificates to that effect.

Columbo, 22d Dec. 1802.

Doctor JAMES ANDERSON, P. G. Madras, to THOMAS CHRISTIE, Esq. Medical Superintendant General at Columbo.

The British name, applied to the rescue of mankind from disease, being now distinguished over all Europe; I trust that our endeavours here, will likewise be crowned with success; as the attention of administration affords a happy presage.

In Europe where the sciences are taught by induction from facts, a name is of little importance; but here where authority is the only source of information, and a name directs the understanding, and conceptions of the mind, things must be managed differently.

From the Sanscrit *murtum*, death, the Persian *murdun*, Latin *mortem*, the English *murder* seem to be derived; as from the Greek *a* privative, and *maraino* to wither the term *amaranth* may have been taken, as well as the name of the Turkish Emperor *Amurat*, and it is well known, that in the year 1653 Christina Queen of Sweden, held a feast of the Gods, where she persided as *Amarante*, or the immortal.

It is not my intention however to institute inductions from the immaterial to the material world, but merely to say that the term Amurtum, will pass more currently through the kingdom of Candy, the Peninsula of India, and Hindoostan, than the vulgar name cow-pox.

The operative part, being as zealously followed up by the Surgeons, as their respective situations can possibly admit; a name that is pleasingly familiar to the natives, may have its use; and I have yet found none, that takes with them so well as the Sanscrit word Amurtum, *immortality*; as it prevents death from small-pox, and is pleasing to them in calling up recollections of their sacred history, of this gift of Dhanwantaree the Prince of Charity, of medicine, &c. and the cow camadenu, being a personage in the same Avatar; Amurtum has become the generic name for cow's milk.

JAMES ANDERSON.

Fort St. George, 10th Jan. 1803.

Doctor JAMES ANDERSON, P. G. Madras, to Doctor HELENUS SCOTT, Bombay.

Sensible of the power of novelty I have hitherto endeavoured to render it advantageous to the vaccine, with considerable effect; as far as regards the proof of resisting small-pox infection, either by inoculation or otherwise, from the Indian Ocean to the Bay of Bengal; another material consideration, its preservation over all that tract, I have lost no oppurtunity of inculcating, on every one possessed of the vaccine virus, never to lose sight of a succession of patients, having discovered no other means to prevent its being lost; and in this latter view, have the pleasure to tell you, that the Medical Board have recommended eleven or twelve stations, at respectable distances from each other, over the whole country.

The filling up the chasms or intervals between those stations, must depend on public opinion, and may be promoted by instructing natives, which is already partially adopted, and by a *fiat* from the *Demiurgue* or College at Benares, to add the symptoms of the vaccine to the *Latchana* of the Medical *Shaster* of *Dhanwantaree*; a measure which will most readily be adopted, as *Dhanwantaree* is one of the thousand and eight names of *Vistnu*, the preserving power of nature; in their Mythology; to whom they acknowledge, not only the food of immortality, but likewise what may be deemed superfluous, a Shaster consisting of 120,000 verses, descriptive of more than 2000 Symptoms of diseases, termed *Latchana*, and their remedies.

The apathy with which I have obſerved ſmall-pox inoculation treated here, where the belief that a vindictive deity may be offended, whom they are induced to appaiſe, upon the ſame principle, as the Greeks offered a Bull to *Apomyos*, *Myiagrus*, or *Myiodes* has led me to the removal, if poſſible; of all ſuch impediments, to the vaccine.

The names of ſmall-pox Deities are various, by ſome Roghini Devi, Mootial Umma, Poliar-Umma, &c. Goddeſſes without limitation; the whole of which reſolves itſelf into the perſonification of their Ideas of Divine Providence.

In the Tamul tongue ſpoken here, *Ummæ* is ſmall-pox, and *Mare*, the the Murrain of Cattle, as well as rain; by which an Epidemic is underſtood; ſo that *Mare-Ummæ* becomes a Minotaur, and Paſiphae the Patragali of Baldſœus; the offerings of Rice and Milk &c. to propitiate, which her generous divinity, might now with propriety be transferred to the encouragement of vaccination, was not terror the moſt powerful of all motives, and mankind more reſtrained by fear, than encouraged by hope.

JAMES ANDERSON.

Fort St. George, Jan, 17, 1803.

Mr. JOHN HAY, Aſſiſtant Surgeon at Errode, to Doctor JAMES ANDERSON, P. G. Madras.

From indiſpoſition, I have not been able to forward a monthly ſtate of inoculation, this I ſhall take an early opportunity to do. It will be a ſatisfaction in the mean while to you, to know that four thouſand, five hundred and twenty eight (4,528) have had the vaccine incited by me, and that all have done, or are doing well.

I do not conſider Pſora as a ſufficient cauſe for the excluſion of ſubjects willing, or deſirous, to have the diſeaſe—having given it to four or five hundred children almoſt covered with it, in no one of whom any bad ſymptoms, or appearance, occured.

JOHN HAY.

Errode, 12, Jan. 1833.

MADRAS GOVERNMENT ADVERTISEMENT.

The Right Honorable the Governor in Council having been pleaſed to announce in an Advertiſement dated the 11th Auguſt 1802, the mode in which it was the intention of His Lordſhip in Council to encourage among the Native Inhabitants of India, the practice of Inoculation for the ſmall-pox, with a view to protect the Native Inhabitants from the calamitous effects of that diſeaſe when ſpread under the influence of natural infection.—His Lordſhip in Council deems it to be proper at this time, to make known the conſiderations under which it has been judged expedient to poſtpone the adoption of the meaſures explained in the above Advertiſement.

The attention of Medical perſons of reputation in Europe having been during a long courſe of years directed to the improvement of the Medical Science, and to the knowledge and diſcovery of arts, calculated to preſerve and meliorate the condition of human life, the reſearches of ſuch perſons have been particularly turned to the means of averting the fatal conſequences, which have been found to ariſe in Europe, in like manner as in India, from the ſmall-pox. For that purpoſe the practice of inoculating for the ſmall-pox was adopted in Europe, and many lives were thereby preſerved.—But in the farther progreſs of the reſearches made by the learned and humane perſons engaged in that purſuit, it has been at length, within this ſhort time, happily diſcovered, that the effects of that dreadful

malady may be averted entirely, and that it may be practicable to explode for ever the small-pox, by the use of cow-pox, which is conveyed from the cow without danger in the infection, after many experiments made in England; and in other countries in Europe, the success of this discovery has, by the blessings of Providence, been found to be infallible, and the persons who have been concerned in conveying that blessing to mankind, have been distinguished with honor and rewards.

The same spirit of benevolence which guided the labours of those persons in Europe, led to the adoption of the means best calculated to convey the fruits of the happy discovery to India; and this humane object having been after much care effected, the inhabitants of India may, by following the example of the European Nations, be for ever freed from farther apprehension or danger from the small-pox.

The Medical Officers at this Presidency, adopting the same course of experiments as had been made in Europe, many Natives have been inoculated with cow-pox at the Presidency and in its vicinity; at Seringapatam, at Hydrabad, in the district of Coimbatore, and in other parts of the Territories under this Government, and the following result has been thereby established.

1st—The disease, denominated cow-pox, is derived from the cow, and may be conveyed with safety to human persons.

2d—Persons, who have been infected with cow-pox, are in no danger of ever being infected with small-pox.

3d—No instance is known of any person having died from the infection by cow-pox, and it may be communicated in any season of the year, or in any situation without danger to the person infected, or to any person living in the same family.

4th—The eruption produced by the cow-pox is of a slight nature, and of short continuance—no sickness proceeds from that disorder, nor is any medicine found to be necessary, either before or subsequently to the infection.

The Right Honorable the Governor in Council trusts that a discovery which ensures such inestimable benefits to mankind, will be received with equal gratitude by the Inhabitants of India, as has been evinced by the Inhabitants of every other part of the World, to whom it has, under the favor of Heaven, been imparted; and His Lordship in Council in tracing the origin of these blessings, reflects with satisfaction, that they cannot fail to be peculiarly endeared in the minds of the Hindoos of India, by their immediate emanation from a source sanctified by the sacred laws of the Hindoo Religion.

Under these impressions, the same measures as have been observed at this Presidency, have been adopted at the Presidencies of Bengal and Bombay, and on the Island of Ceylon, for the purpose of rendering the use of cow-pox general throughout India; and the Right Honorable the Governor in Council, with a view to perpetuate in the Territories under this Government, the advantages of this discovery, has furnished instructions and Regulations to the Medical Board and Medical Officers at Fort St. George, and to the Medical Officers at the Subordinate Stations, for explaining to the Native Inhabitants at the Presidency, and throughout the Peninsula of India, the process observed in inoculating with cow-pox, and for communicating that infection to all Persons, who shall be desirous of receiving it, under a just sense of the benefits and security which it will not fail to convey to themselves and to their families.

His Lordship in Council has been also pleased to direct, that Native Doctors, desirous of being instructed in the mode of inoculating with cow-pox, shall be furnished with instructions for that purpose by the

Medical Officers at the different Stations in the Honorable Company's Service; and in order further to encourage such Native Doctors to extend that practice, His Lordship in Council has been pleased to resolve that until further notice, the Native Doctors so employed, shall receive for every hundred persons certified to have been successfully inoculated with cow-pox, a reward of ten Pagodas, payable from the Public Treasury at the Presidency, or by the Collectors of Revenue at the Subordinate Stations.

Published by order of the Right Honorable the Governor in Council. G. G. KEBLE.

SEC. TO GOVERNMENT.

Fort St. George, Jan. 19, 1803.

His Excellency SIRFOJEE, Maha Rajah of Tanjore, to Doctor JAMES ANDERSON, P. G. Madras.

I have had the pleasure to receive your kind letter, with the printed papers, relative to the vaccine inoculation, which you have had the goodness to forward to me, and which I have perused with great pleasure, and am very happy to see that you, and many other learned and skilful Medical Gentlemen, have had the good fortune to succeed in inoculating many thousands, in all the different parts of India.

The Correspondence between you and the other Gentlemen, represents in the most satisfactory manner, the rapid progress they have made in vaccine inoculation, which has already extended from Cape Comorin to Benares, and which I am convinced will be of the greatest utility and advantage to all the Inhabitants of the Peninsula and neighbouring Islands. I beg leave to congratulate you on the present new year, and pray, that Providence may grant you long life, and good health and happiness.

SIRFOJEE, *Rajah.*

Tanjore, Jan. 7, 1803.

Doctor ANDERSON's Answer.

The vaccine of England, honored with your notice, is an inexhaustible source against the scourge of small-pox, as well as superstitions which prevail here, and like the Adraste or Nemesis of ancient Europe, excite fear and dread.

There is no doubt, that the vaccine attended some Cows, in remote as well as present times, but the application of it, has been reserved by Divine Providence, to the researches of a man named Edward Jenner.

In the last two or three years, libations from the Patrum of Jenner, have been distributed to every quarter of the civilized world, which, as appears by a Government Advertisement of the 19th instant, will in future flow from the Cornucopia of Administration.

With every wish for your health and happiness. I am &c.

JAMES ANDERSON.

Fort St. George, Jan. 26, 1803.

Mr. DAVID SCOTT, Surgeon at Sera, to Doctor JAMES ANDERSON, P. G. Madras.

On the first of this month, I received a small supply of vaccine virus from Chittledroog, and immediately inoculated two children, in both it took effect; since then the disease has been communicated to 128 others, mostly children of the inhabitants, and by the end of the

month I expect the number will be doubled.

I have ſound little difficulty in prevailing on the inhabitants to adopt this preventive of the ſmall-pox, and that it may not be loſt in the event of our moving, I have inſtructed a Native Practitioner how to carry it on.

Mr. Fowle arrived on the 16th from Ballary, he was good enough to examine my patients, and aſſiſt in inoculating, as this Gentlemen had conſiderable practice at home, I was happy to find he agreed with me in opinion that we poſſeſs the genuine diſeaſe.

DAVID SCOTT.

Sera, Jan. 22, 1803.

ERRATA.

Page 9	for, * Vide Appendix	read	Vide Government Gazette of the 2d Sept. 1802.
23	Latchmana		Latchana.
24	Darawanter		Dhanwantaree.
50	Hoyles		Hoyes.
60	Sankerdroog		Sankledroog.
61	Mallamoodra		Mallamoodra.
72	Doondorbee		Doondoobee.